

**Annexure- I**  
**Category wise, Voltage wise & Month Wise Sales for FY2016-17 to FY2022-23**

FY2016-17

Sales / Forecast Sales (MU)	April	May	June	July	August	September	October	November	December	January	February	March	Total
<b>LT Category</b>	<b>1566.65</b>	<b>1512.49</b>	<b>1294.52</b>	<b>1431.78</b>	<b>1780.03</b>	<b>1412.40</b>	<b>1647.42</b>	<b>1517.40</b>	<b>1729.59</b>	<b>1820.76</b>	<b>1743.90</b>	<b>2177.43</b>	<b>19634.36</b>
Category I (A&B) - Domestic	767.83	696.70	614.17	584.17	603.57	541.49	558.87	492.03	508.01	488.86	534.46	693.87	7084.04
Category II (A,B,C & D) - Non-domestic/Commercial	220.95	203.62	190.15	182.09	189.48	166.24	178.13	162.92	167.11	160.30	174.97	212.83	2208.81
Category III - Industrial	69.70	67.76	65.95	66.36	66.71	59.46	65.85	67.06	75.04	67.80	67.47	73.51	812.65
Category IV (A,&B) - Cottage Industries & Agrobased Ind.	0.82	0.81	0.82	0.85	0.73	0.77	0.73	0.75	0.80	0.73	0.71	0.81	9.34
Category V (A, B & C) - Irrigation and Agriculture	443.82	483.30	362.31	536.48	856.23	583.23	780.97	732.23	914.56	1040.00	902.25	1132.25	8767.64
Category VI (A & B) - Local Bodies, St. Lighting & PWS	57.75	55.40	55.43	56.05	57.26	55.98	57.45	57.08	58.71	57.99	58.27	57.40	684.76
Category VII (A & B) - General Purpose	5.62	4.76	5.54	5.61	5.87	5.08	5.24	5.12	5.16	4.87	5.58	6.56	65.01
Category VIII -Temporary Supply	0.15	0.15	0.15	0.16	0.18	0.14	0.18	0.21	0.20	0.21	0.17	0.21	2.11
<b>HT Category at 11 KV</b>	<b>411.68</b>	<b>378.15</b>	<b>394.38</b>	<b>368.15</b>	<b>368.32</b>	<b>374.45</b>	<b>342.36</b>	<b>374.51</b>	<b>355.68</b>	<b>367.01</b>	<b>386.12</b>	<b>369.72</b>	<b>4490.53</b>
HT-I Industry Segregated	262.86	237.60	255.66	244.53	242.90	243.90	224.83	252.00	243.86	253.35	264.41	245.18	2971.10
HT-I (B) Ferro-Alloys	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.03	0.03	0.10
HT-II - Others	132.80	127.30	125.68	112.04	112.92	116.73	104.80	106.69	97.74	97.80	104.93	107.08	1346.51
HT-III Airports, Railway and Busstations	0.55	0.50	0.53	0.45	0.43	0.43	0.39	0.38	0.34	0.37	0.37	0.41	5.14
HT -IV A Govt Lift Irrigation	1.11	0.10	0.08	0.35	1.56	2.06	1.91	3.59	2.87	3.72	4.35	4.40	26.12
HT- IV B - CP Water Supply Schemes	2.45	2.15	2.31	2.06	1.86	1.90	2.08	2.80	2.42	2.52	2.76	2.87	28.18
HT-VI Townships and Residential Colonies	8.67	7.88	7.69	6.41	6.24	6.78	5.88	6.42	5.79	6.39	6.54	6.90	81.58
HT -VII - Temporary Supply	3.24	2.60	2.44	2.31	2.40	2.64	2.48	2.62	2.65	2.83	2.72	2.86	31.80
HT - RESCOs													0.00
<b>HT Category at 33 KV</b>	<b>408.27</b>	<b>374.15</b>	<b>342.04</b>	<b>294.70</b>	<b>287.23</b>	<b>299.09</b>	<b>276.37</b>	<b>311.07</b>	<b>276.92</b>	<b>271.99</b>	<b>286.70</b>	<b>298.04</b>	<b>3726.57</b>
HT-I Industry Segregated	348.62	315.95	281.04	240.70	228.15	241.93	222.10	254.69	225.03	222.17	233.63	245.99	3059.99
HT-I (B) Ferro-Alloys	0.00	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT-II - Others	54.47	53.86	56.78	50.41	53.95	50.81	48.90	48.27	45.14	43.62	46.48	46.26	598.96
HT-III Airports, Railway and Busstations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT -IV A Govt Lift Irrigation	0.53	0.24	0.31	0.44	1.85	3.01	2.37	4.92	3.32	2.63	2.98	2.03	24.64
HT- IV B - CP Water Supply Schemes	0.01	0.01	0.01	0.01	0.00	0.01	0.03	0.04	0.10	0.13	0.02	0.02	0.39
HT-VI Townships and Residential Colonies	4.64	4.09	3.91	3.14	3.27	3.34	2.98	3.15	3.33	3.43	3.58	3.74	42.59
HT -VII - Temporary Supply		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT - RESCOs													0.00
<b>HT Category at 132 KV</b>	<b>261.79</b>	<b>217.78</b>	<b>212.36</b>	<b>188.73</b>	<b>261.38</b>	<b>298.01</b>	<b>277.39</b>	<b>295.36</b>	<b>271.40</b>	<b>258.32</b>	<b>251.25</b>	<b>198.96</b>	<b>2992.72</b>
HT-I Industry Segregated	196.00	160.70	154.18	141.20	142.87	151.32	132.16	151.49	131.11	134.99	131.69	142.31	1770.02
HT-I (B) Ferro-Alloys	12.20	14.66	16.92	14.38	13.18	14.56	16.10	14.06	11.74	11.02	11.25	9.78	159.87
HT-II - Others	5.80	6.17	6.45	5.59	5.10	4.97	5.94	5.38	4.81	4.81	4.32	4.34	63.68
HT-III Airports, Railway and Busstations	5.02	4.92	5.45	5.02	4.97	4.92	4.68	4.51	3.89	4.00	3.94	4.06	55.37
HT -IV A Govt Lift Irrigation	31.27	19.86	17.21	12.46	84.03	109.78	106.61	108.48	108.37	90.57	86.83	26.78	802.27
HT- IV B - CP Water Supply Schemes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT-V (A) Railway Traction	11.49	11.48	12.15	10.07	11.22	12.46	11.91	11.44	11.48	12.94	13.21	11.68	141.52
HT-V (B) HMR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT-VI Townships and Residential Colonies		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT -VII - Temporary Supply		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT - RESCOs													0.00
<b>Total</b>	<b>2648.40</b>	<b>2482.56</b>	<b>2243.30</b>	<b>2283.36</b>	<b>2696.96</b>	<b>2383.95</b>	<b>2543.54</b>	<b>2498.35</b>	<b>2633.58</b>	<b>2718.07</b>	<b>2667.96</b>	<b>3044.15</b>	<b>30844.18</b>

**FY2017-18**

Sales / Forecast Sales (MU)	April	May	June	July	August	September	October	November	December	January	February	March	Total
<b>LT Category</b>	<b>1944.62</b>	<b>1774.13</b>	<b>1399.46</b>	<b>1874.67</b>	<b>2081.65</b>	<b>1982.49</b>	<b>1664.26</b>	<b>1624.16</b>	<b>1781.68</b>	<b>2076.25</b>	<b>2034.10</b>	<b>2563.45</b>	<b>22800.94</b>
Category I (A&B) - Domestic	793.27	841.61	630.23	621.75	643.28	617.95	590.13	544.90	511.46	515.58	542.91	706.26	7559.34
Category II (A,B,C & D) - Non-domestic/Commercial	230.75	239.93	198.46	196.83	200.10	191.17	189.06	185.42	173.58	170.43	179.54	223.20	2378.45
Category III - Industrial	72.14	74.72	65.93	68.12	67.02	63.68	66.25	76.87	78.37	74.89	68.63	75.01	851.64
Category IV (A,&B) - Cottage Industries & Agrobased Ind.	0.78	0.81	0.75	0.77	0.71	0.71	0.72	0.76	0.78	0.73	0.74	0.79	9.05
Category V (A, B & C) - Irrigation and Agriculture	783.86	555.37	442.58	925.05	1,109.80	1,052.50	762.81	761.52	963.86	1,263.08	1,191.60	1,506.86	11318.87
Category VI (A & B) - Local Bodies, St. Lighting & PWS	57.52	55.81	55.64	55.87	54.12	50.89	49.01	48.50	47.85	45.99	44.53	43.97	609.69
Category VII (A & B) - General Purpose	6.04	5.60	5.67	6.04	6.39	5.36	6.05	5.91	5.48	5.27	5.80	6.94	70.56
Category VIII -Temporary Supply	0.25	0.27	0.21	0.23	0.25	0.23	0.24	0.29	0.31	0.29	0.35	0.42	3.33
<b>HT Category at 11 KV</b>	<b>436.97</b>	<b>421.40</b>	<b>438.43</b>	<b>393.99</b>	<b>410.25</b>	<b>411.85</b>	<b>386.02</b>	<b>415.28</b>	<b>407.72</b>	<b>398.26</b>	<b>411.29</b>	<b>397.52</b>	<b>4928.97</b>
HT-I Industry Segregated	280.20	267.55	281.39	262.00	271.36	273.87	253.47	281.47	282.79	277.15	284.35	265.01	3280.60
HT-I (B) Ferro-Alloys	0.03	0.02	-	0.01	-	-	-	-	-	-	-	-	0.06
HT-II - Others	136.67	136.93	140.61	117.95	123.46	122.17	117.04	117.05	108.57	101.21	106.27	112.40	1440.32
HT-III Airports, Railway and Busstations	0.47	0.45	0.47	0.40	0.41	0.41	0.39	0.41	0.35	0.33	0.36	0.38	4.82
HT -IV A Govt Lift Irrigation	3.47	0.53	0.33	0.74	1.35	1.64	1.54	2.38	2.41	5.97	6.14	5.58	32.10
HT- IV B - CP Water Supply Schemes	3.09	2.90	2.73	2.58	2.71	2.64	2.97	3.29	3.14	3.03	3.12	3.05	35.26
HT-VI Townships and Residential Colonies	9.72	9.86	9.60	7.11	7.67	7.62	7.15	7.08	6.62	6.64	6.94	7.22	93.23
HT -VII - Temporary Supply	3.32	3.17	3.31	3.18	3.28	3.49	3.45	3.60	3.84	3.94	4.10	3.88	42.58
HT - RESCOs													0.00
<b>HT Category at 33 KV</b>	<b>344.52</b>	<b>346.77</b>	<b>355.97</b>	<b>306.86</b>	<b>344.92</b>	<b>380.26</b>	<b>390.29</b>	<b>391.04</b>	<b>337.79</b>	<b>344.80</b>	<b>384.21</b>	<b>400.85</b>	<b>4328.29</b>
HT-I Industry Segregated	280.69	281.46	288.51	249.68	282.04	314.05	328.72	328.39	276.19	283.67	317.66	337.31	3568.37
HT-I (B) Ferro-Alloys	-	-	-	-	-	-	-	-	2.84	2.61	2.75	2.48	10.68
HT-II - Others	56.53	59.10	60.27	51.89	55.10	57.05	54.86	55.14	52.43	49.92	55.06	52.64	660.00
HT-III Airports, Railway and Busstations	-	-	-	-	-	-	-	-	-	-	-	-	0.00
HT -IV A Govt Lift Irrigation	1.71	0.37	1.56	1.28	3.28	4.82	2.72	3.35	2.38	3.77	3.51	3.03	31.77
HT- IV B - CP Water Supply Schemes	0.05	0.07	0.12	0.10	0.33	0.16	0.17	0.24	0.21	1.00	0.95	0.80	4.20
HT-VI Townships and Residential Colonies	5.54	5.77	5.51	3.91	4.17	4.19	3.82	3.91	3.74	3.75	3.87	4.05	52.24
HT -VII - Temporary Supply										0.08	0.41	0.54	1.03
HT - RESCOs													0.00
<b>HT Category at 132 KV</b>	<b>217.38</b>	<b>201.18</b>	<b>205.96</b>	<b>181.99</b>	<b>226.93</b>	<b>290.51</b>	<b>377.19</b>	<b>393.20</b>	<b>344.37</b>	<b>336.83</b>	<b>396.26</b>	<b>358.86</b>	<b>3530.66</b>
HT-I Industry Segregated	150.68	145.03	156.18	128.27	148.99	162.62	171.19	180.81	158.81	170.19	179.42	202.19	1954.39
HT-I (B) Ferro-Alloys	7.81	9.06	11.81	11.32	11.36	10.90	10.14	9.88	5.95	10.43	11.92	9.05	119.63
HT-II - Others	5.99	6.37	6.13	4.97	5.10	5.28	4.85	3.72	3.37	3.04	3.14	3.44	55.39
HT-III Airports, Railway and Busstations	5.34	5.53	6.09	5.42	5.50	5.89	5.76	5.15	4.65	4.47	4.43	4.63	62.83
HT -IV A Govt Lift Irrigation	34.80	22.58	11.77	18.45	41.74	91.16	170.92	176.70	155.24	131.10	179.17	122.98	1156.62
HT- IV B - CP Water Supply Schemes	-	-	-	-	-	-	-	-	-	-	-	-	0.00
HT-V (A) Railway Traction	12.76	12.62	13.98	13.56	14.24	14.66	14.33	15.46	13.81	14.88	15.54	13.85	169.69
HT-V (B) HMR								1.48	2.55	2.70	2.64	2.73	12.11
HT-VI Townships and Residential Colonies	-	-	-	-	-	-	-	-	-	-	-	-	0.00
HT -VII - Temporary Supply	-	-	-	-	-	-	-	-	-	-	-	-	0.00
HT - RESCOs													0.00
<b>Total</b>	<b>2943.49</b>	<b>2743.48</b>	<b>2399.83</b>	<b>2757.50</b>	<b>3063.75</b>	<b>3065.12</b>	<b>2817.77</b>	<b>2823.68</b>	<b>2871.57</b>	<b>3156.15</b>	<b>3225.86</b>	<b>3720.68</b>	<b>35588.86</b>

**FY2018-19**

Sales / Forecast Sales (MU)	April	May	June	July	August	September	October	November	December	January	February	March	Total
<b>LT Category</b>	<b>1957.59</b>	<b>1813.89</b>	<b>1597.71</b>	<b>2091.10</b>	<b>2210.38</b>	<b>2326.59</b>	<b>2535.84</b>	<b>1934.49</b>	<b>1848.03</b>	<b>1902.56</b>	<b>1958.76</b>	<b>2616.25</b>	<b>24793.18</b>
Category I (A&B) - Domestic	803.09	864.10	718.22	634.80	629.96	676.28	668.56	607.38	555.70	535.84	609.33	798.11	<b>8101.36</b>
Category II (A,B,C & D) - Non-domestic/Commercial	238.03	246.28	225.36	207.01	201.00	211.28	214.06	199.86	184.00	177.24	203.96	249.41	<b>2557.48</b>
Category III - Industrial	72.90	76.67	72.24	71.98	70.10	70.33	71.78	76.52	82.03	76.96	74.93	77.74	<b>894.18</b>
Category IV (A,&B) - Cottage Industries & Agrobased Ind.	0.81	0.83	0.82	0.76	0.74	0.78	0.75	0.75	0.81	0.75	0.77	0.86	<b>9.44</b>
Category V (A & B ) - Agriculture	792.47	577.10	532.70	1127.73	1260.36	1317.76	1531.67	1000.51	975.57	1062.50	1020.45	1438.95	<b>12637.78</b>
Category VI (A & B) - Local Bodies, St. Lighting & PWS	43.82	42.19	41.14	41.44	40.87	41.96	41.51	41.06	41.82	41.31	39.82	40.39	<b>497.33</b>
Category VII (A & B) - General Purpose & Religious Places	6.00	6.23	6.57	6.48	6.32	6.80	5.92	6.38	5.73	5.29	6.62	7.34	<b>75.68</b>
Category VIII -Temporary Supply	0.47	0.49	0.65	0.89	1.03	1.40	1.59	2.03	2.38	2.67	2.88	3.45	<b>19.92</b>
Category IX-Electric Vehicle Charging Stations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
<b>HT Category at 11 KV</b>	<b>464.07</b>	<b>454.09</b>	<b>478.04</b>	<b>437.11</b>	<b>440.52</b>	<b>447.96</b>	<b>447.28</b>	<b>456.16</b>	<b>433.46</b>	<b>425.38</b>	<b>444.58</b>	<b>438.23</b>	<b>5366.89</b>
HT-I Industry	300.20	286.60	306.84	287.75	291.05	295.90	292.15	300.99	295.66	296.10	305.75	285.63	<b>3544.62</b>
HT-I (B) Ferro-Alloys	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
HT-II - Others	142.77	146.29	149.68	130.00	129.26	126.87	128.92	127.66	114.22	104.61	112.59	125.15	<b>1538.02</b>
HT-III Airports, Railway and Busstations	0.43	0.47	0.48	0.40	0.39	0.38	0.40	0.40	0.38	0.34	0.34	0.37	<b>4.78</b>
HT-IV A Lift Irrigation & Agriculture	3.45	1.17	0.79	1.09	1.50	4.76	5.48	6.45	2.67	3.68	4.58	4.73	<b>40.35</b>
HT- IV B - CP Water Supply Schemes	3.44	3.26	3.81	4.07	4.42	5.76	6.19	6.38	6.42	6.71	6.81	6.80	<b>64.07</b>
HT-VI Townships and Residential Colonies	9.54	10.33	10.42	8.25	8.00	7.99	8.01	8.10	7.57	7.50	7.61	8.74	<b>102.06</b>
HT - VII - Temporary Supply	4.24	5.97	6.02	5.55	5.90	6.30	6.13	6.18	6.54	6.44	6.90	6.81	<b>72.98</b>
HT- RESCOs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
HT IX-Electric Vehicle Charging Stations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
<b>HT Category at 33 KV</b>	<b>470.12</b>	<b>451.42</b>	<b>479.25</b>	<b>438.76</b>	<b>447.84</b>	<b>450.37</b>	<b>491.70</b>	<b>493.75</b>	<b>439.84</b>	<b>440.51</b>	<b>437.71</b>	<b>442.06</b>	<b>5483.33</b>
HT-I Industry	392.53	370.39	392.04	360.67	366.35	365.71	404.11	402.26	355.81	357.21	349.62	355.34	<b>4472.03</b>
HT-I (B) Ferro-Alloys	2.42	2.57	2.27	2.63	2.16	2.71	3.08	4.04	3.99	4.91	4.51	4.04	<b>39.34</b>
HT-II - Others	65.63	65.56	71.26	64.07	63.83	62.77	62.94	62.56	57.65	54.52	59.23	61.78	<b>751.79</b>
HT-III Airports, Railway and Busstations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
HT-IV A Lift Irrigation & Agriculture	2.16	0.12	0.42	0.05	1.32	3.20	4.32	5.84	2.48	3.96	3.13	1.52	<b>28.52</b>
HT- IV B - CP Water Supply Schemes	1.32	2.89	4.26	3.52	6.32	7.57	9.43	11.63	12.76	13.10	13.86	12.01	<b>98.67</b>
HT-VI Townships and Residential Colonies	5.48	6.50	6.56	4.84	5.17	5.03	4.98	4.98	4.72	4.62	4.87	5.38	<b>63.13</b>
HT - VII - Temporary Supply	0.58	3.39	2.44	2.98	2.69	3.38	2.84	2.45	2.43	2.20	2.48	1.99	<b>29.85</b>
HT- RESCOs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
HT IX-Electric Vehicle Charging Stations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
<b>HT Category at 132 KV</b>	<b>338.42</b>	<b>281.23</b>	<b>284.35</b>	<b>270.91</b>	<b>471.63</b>	<b>489.08</b>	<b>485.69</b>	<b>518.92</b>	<b>444.68</b>	<b>387.38</b>	<b>345.14</b>	<b>382.50</b>	<b>4699.92</b>
HT-I Industry	219.81	215.35	223.97	205.01	203.20	201.96	236.40	236.04	206.19	222.44	210.68	217.61	<b>2598.66</b>
HT-I (B) Ferro-Alloys	9.93	10.43	11.60	15.36	13.31	15.52	14.76	15.63	16.72	16.63	24.61	20.31	<b>184.81</b>
HT-II - Others	4.38	4.44	4.97	4.20	4.16	4.05	3.93	3.89	3.60	2.95	3.54	4.03	<b>48.14</b>
HT-III Airports, Railway and Busstations	5.80	6.11	6.36	5.86	5.89	6.12	6.17	6.01	5.41	5.07	5.70	6.13	<b>70.63</b>
HT-IV A Lift Irrigation & Agriculture	77.20	22.60	13.89	18.92	219.71	235.56	195.85	222.82	178.96	106.45	65.06	98.76	<b>1455.78</b>
HT- IV B - CP Water Supply Schemes	0.00	0.00	0.00	0.00	4.62	4.52	6.09	10.14	10.93	10.64	12.00	13.18	<b>72.12</b>
HT-V (A) Railway Traction	17.69	17.66	18.55	16.81	16.83	17.61	17.50	18.96	18.06	18.13	18.30	17.47	<b>213.57</b>
HT-V (B) HMR	3.61	4.64	5.01	4.75	3.91	3.74	4.99	5.43	4.81	5.06	5.25	5.01	<b>56.21</b>
HT-VI Townships and Residential Colonies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
HT - VII - Temporary Supply	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
HT- RESCOs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
HT IX-Electric Vehicle Charging Stations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
<b>Total</b>	<b>3230.20</b>	<b>3000.63</b>	<b>2839.35</b>	<b>3237.88</b>	<b>3570.37</b>	<b>3714.00</b>	<b>3960.51</b>	<b>3403.32</b>	<b>3166.01</b>	<b>3155.83</b>	<b>3186.19</b>	<b>3879.04</b>	<b>40343.32</b>

2019-20

Sales / Forecast Sales (MU)	April	May	June	July	August	September	October	November	December	January	February	March	Total
<b>LT Category</b>	<b>2071.16</b>	<b>2110.24</b>	<b>1727.97</b>	<b>1841.21</b>	<b>2113.41</b>	<b>1830.45</b>	<b>1674.25</b>	<b>1594.76</b>	<b>1943.18</b>	<b>2151.63</b>	<b>2163.81</b>	<b>2347.38</b>	<b>23569.45</b>
Category I (A&B) - Domestic	884.88	1043.91	792.47	709.52	712.02	683.04	670.67	623.02	587.79	604.10	620.28	777.95	8709.65
Category II (A,B,C & D) - Non-domestic/Commercial	256.56	285.33	241.30	229.50	218.64	213.82	209.36	206.51	194.34	196.37	205.11	125.23	2582.09
Category III - Industrial	76.25	79.65	71.29	75.36	68.29	65.42	63.79	74.44	81.51	76.33	74.67	39.82	846.82
Category IV (A,&B) - Cottage Industries & Agrobased Ind.	0.85	0.84	0.81	0.81	0.77	0.78	0.77	0.79	0.82	0.65	0.76	0.42	9.08
Category V (A & B ) - Agriculture	803.00	649.04	573.29	776.23	1063.16	817.90	677.76	638.62	1027.11	1221.03	1210.79	1360.47	10818.39
Category VI (A & B) - Local Bodies, St. Lighting & PWS	39.60	40.31	38.95	39.09	40.18	39.51	42.54	41.05	41.55	43.00	41.04	37.20	484.03
Category VII (A & B) - General Purpose & Religious Places	6.70	7.46	6.46	7.08	6.99	6.41	5.88	6.69	6.18	5.98	6.68	4.02	76.53
Category VIII -Temporary Supply	3.31	3.70	3.39	3.62	3.36	3.57	3.48	3.64	3.88	4.16	4.47	2.28	42.87
Category IX-Electric Vehicle Charging Stations	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0003	0.0001	0.0005
<b>HT Category at 11 KV</b>	<b>491.41</b>	<b>492.68</b>	<b>515.78</b>	<b>471.68</b>	<b>464.41</b>	<b>464.49</b>	<b>426.82</b>	<b>469.48</b>	<b>461.97</b>	<b>465.10</b>	<b>488.25</b>	<b>467.30</b>	<b>5679.38</b>
HT-I Industry	306.38	303.40	313.59	302.26	300.51	298.35	270.01	302.35	311.82	316.19	328.20	307.74	3660.81
HT-I (B) Ferro-Alloys	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT-II - Others	153.17	160.67	171.93	143.08	138.64	136.23	128.40	136.44	122.81	117.40	128.05	127.31	1664.12
HT-III Airports, Railway and Busstations	0.41	0.45	0.47	0.39	0.36	0.36	0.33	0.33	0.30	0.30	0.32	0.31	4.34
HT-IV A Lift Irrigation & Agriculture	3.71	0.84	0.76	0.74	1.63	5.26	4.03	4.24	2.29	5.98	5.99	6.42	41.89
HT- IV B - CP Water Supply Schemes	8.63	7.57	7.77	8.25	7.21	7.25	7.04	8.16	8.35	8.50	8.50	8.25	95.48
HT-VI Townships and Residential Colonies	11.59	12.50	13.82	9.76	9.09	8.85	8.74	9.10	8.32	8.49	8.76	9.47	118.49
HT - VII - Temporary Supply	7.52	7.25	7.44	7.20	6.97	8.00	7.91	8.53	7.71	7.85	8.03	7.42	91.83
HT- RESCOs													0.00
HT IX-Electric Vehicle Charging Stations	0.00	0.00	0.00	0.00	0.00	0.19	0.36	0.33	0.37	0.39	0.40	0.39	2.43
<b>HT Category at 33 KV</b>	<b>493.09</b>	<b>466.94</b>	<b>516.62</b>	<b>482.34</b>	<b>470.07</b>	<b>463.76</b>	<b>412.87</b>	<b>430.54</b>	<b>415.96</b>	<b>420.35</b>	<b>437.75</b>	<b>417.69</b>	<b>5427.97</b>
HT-I Industry	392.07	360.78	401.21	381.48	367.95	359.49	315.50	329.63	322.74	327.06	339.79	321.23	4218.92
HT-I (B) Ferro-Alloys	4.55	4.88	4.47	4.65	4.91	4.04	3.85	2.92	2.46	2.58	2.40	2.34	44.05
HT-II - Others	71.36	74.91	83.57	73.96	73.49	75.21	71.14	74.09	66.07	64.17	70.43	69.55	867.96
HT-III Airports, Railway and Busstations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT-IV A Lift Irrigation & Agriculture	0.94	0.59	0.19	0.22	0.93	2.20	1.64	1.47	1.63	2.47	2.97	2.34	17.59
HT- IV B - CP Water Supply Schemes	14.27	13.80	13.72	11.95	12.40	12.75	12.18	13.12	13.06	13.79	13.73	13.95	158.72
HT-VI Townships and Residential Colonies	7.54	8.99	9.43	5.96	5.81	5.80	5.29	5.58	5.26	5.38	5.58	5.98	76.60
HT - VII - Temporary Supply	2.36	2.99	4.03	4.12	4.58	4.27	3.27	3.72	4.74	4.90	2.85	2.30	44.13
HT- RESCOs													0.00
HT IX-Electric Vehicle Charging Stations													0.00
<b>HT Category at 132 KV</b>	<b>361.93</b>	<b>310.66</b>	<b>339.12</b>	<b>313.46</b>	<b>413.09</b>	<b>565.39</b>	<b>483.75</b>	<b>500.62</b>	<b>466.85</b>	<b>477.47</b>	<b>516.61</b>	<b>483.54</b>	<b>5232.49</b>
HT-I Industry	232.58	211.74	225.03	213.29	211.73	195.46	189.71	208.85	209.16	201.80	209.47	195.11	2503.93
HT-I (B) Ferro-Alloys	26.34	20.22	23.21	21.26	17.96	13.30	13.13	10.95	6.61	9.99	14.96	16.02	193.95
HT-II - Others	4.83	5.09	5.51	4.76	4.06	4.23	3.83	4.24	3.46	3.32	3.78	3.72	50.82
HT-III Airports, Railway and Busstations	7.01	7.37	8.50	7.68	7.11	7.46	7.35	7.31	6.69	6.45	7.03	6.46	86.41
HT-IV A Lift Irrigation & Agriculture	50.56	24.21	34.28	24.28	130.01	301.46	226.43	224.67	192.10	207.44	231.59	214.54	1861.57
HT- IV B - CP Water Supply Schemes	15.33	16.25	16.82	15.02	17.50	16.47	18.22	17.79	17.12	18.20	17.93	18.14	204.79
HT-V (A) Railway Traction	18.49	18.61	18.85	20.85	18.32	20.49	18.43	19.86	25.18	23.59	24.66	22.67	250.00
HT-V (B) HMR	6.79	7.17	6.92	6.32	6.40	6.52	6.65	6.95	6.53	6.69	7.19	6.88	81.01
HT-VI Townships and Residential Colonies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT - VII - Temporary Supply	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT- RESCOs													0.00
HT IX-Electric Vehicle Charging Stations													0.00
<b>Total</b>	<b>3417.59</b>	<b>3380.52</b>	<b>3099.49</b>	<b>3108.69</b>	<b>3460.98</b>	<b>3324.09</b>	<b>2997.69</b>	<b>2995.40</b>	<b>3287.96</b>	<b>3514.56</b>	<b>3606.42</b>	<b>3715.91</b>	<b>39909.30</b>



## 2020-21

Sales / Forecast Sales (MU)	April	May	June	July	August	September	October	November	December	January	February	March	Total
<b>LT Category</b>	<b>1881.74</b>	<b>2021.49</b>	<b>1608.96</b>	<b>2077.18</b>	<b>1912.79</b>	<b>1764.32</b>	<b>1624.18</b>	<b>1417.14</b>	<b>1984.74</b>	<b>2412.80</b>	<b>2310.19</b>	<b>3270.69</b>	<b>24286.22</b>
Category I (A&B) - Domestic	889.48	1007.14	774.12	787.64	711.48	733.63	716.04	619.75	597.95	616.10	615.98	842.53	8911.84
Category II (A,B,C & D) - Non-domestic/Commercial	157.24	245.76	166.26	165.38	155.67	171.68	177.68	167.37	169.94	173.35	180.28	229.97	2160.57
Category III - Industrial	81.52	63.44	63.14	66.77	64.06	70.53	69.91	77.57	87.05	78.66	76.93	80.44	880.01
Category IV (A,&B) - Cottage Industries & Agrobased Ind.	1.12	0.82	0.76	0.81	0.68	0.81	0.77	0.73	0.81	0.74	0.74	0.82	9.58
Category V (A & B ) - Agriculture	700.88	652.52	557.74	1005.73	937.30	743.72	613.03	504.95	1080.42	1496.25	1389.22	2063.08	11744.84
Category VI (A & B) - Local Bodies, St. Lighting & PWS	45.42	41.22	40.34	44.05	36.91	36.38	38.79	39.13	39.83	38.82	36.46	40.88	478.22
Category VII (A & B) - General Purpose & Religious Places	2.14	6.08	3.59	3.49	3.27	3.65	3.65	3.42	3.64	3.61	4.99	6.18	47.71
Category VIII -Temporary Supply	3.94	4.52	3.02	3.31	3.42	3.92	4.32	4.21	5.09	5.29	5.58	6.80	53.43
Category IX-Electric Vehicle Charging Stations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02
<b>HT Category at 11 KV</b>	<b>292.06</b>	<b>341.09</b>	<b>421.07</b>	<b>406.96</b>	<b>411.74</b>	<b>433.34</b>	<b>427.72</b>	<b>446.05</b>	<b>447.71</b>	<b>461.55</b>	<b>469.85</b>	<b>454.47</b>	<b>5013.61</b>
HT-I Industry	179.85	226.56	284.68	284.77	286.10	302.35	296.49	312.36	321.46	328.87	328.01	308.72	3460.22
HT-I (B) Ferro-Alloys	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT-II - Others	82.26	85.21	106.06	96.06	97.93	100.08	101.43	102.75	96.20	98.12	105.46	110.21	1181.78
HT-III Airports, Railway and Busstations	0.16	0.13	0.18	0.19	0.19	0.18	0.20	0.22	0.22	0.22	0.22	0.24	2.35
HT-IV A Lift Irrigation & Agriculture	3.91	1.12	1.39	1.09	1.49	3.87	3.19	4.29	2.37	5.82	6.69	6.89	42.12
HT- IV B - CP Water Supply Schemes	9.29	9.21	8.94	8.90	8.82	9.34	8.56	8.18	10.08	10.47	10.72	10.05	112.56
HT-VI Townships and Residential Colonies	11.64	13.60	13.89	10.10	10.44	10.38	10.01	9.76	9.04	9.14	9.49	10.10	127.59
HT - VII - Temporary Supply	4.92	5.26	5.93	5.85	6.77	7.14	7.73	8.32	8.04	8.59	8.93	7.92	85.40
HT- RESCOs													0.00
HT IX-Electric Vehicle Charging Stations	0.03	0.00	0.00	0.00	0.00	0.00	0.11	0.17	0.30	0.32	0.33	0.34	1.60
<b>HT Category at 33 KV</b>	<b>247.22</b>	<b>294.82</b>	<b>368.28</b>	<b>358.06</b>	<b>364.92</b>	<b>389.28</b>	<b>391.64</b>	<b>394.42</b>	<b>389.78</b>	<b>424.31</b>	<b>454.69</b>	<b>459.62</b>	<b>4537.05</b>
HT-I Industry	174.40	221.27	284.78	280.18	287.25	307.80	311.07	319.32	312.07	339.90	367.04	370.78	3575.86
HT-I (B) Ferro-Alloys	0.26	1.42	2.36	2.55	2.36	1.72	2.30	2.58	2.38	2.68	2.50	2.37	25.49
HT-II - Others	45.01	45.26	54.52	51.01	50.42	53.13	53.19	53.73	51.79	54.13	56.29	57.69	626.18
HT-III Airports, Railway and Busstations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT-IV A Lift Irrigation & Agriculture	1.96	0.23	0.07	0.08	0.41	0.84	0.69	1.36	0.82	1.39	2.93	3.73	14.51
HT- IV B - CP Water Supply Schemes	16.08	15.72	15.83	15.79	16.24	17.09	16.09	9.85	15.23	18.59	18.31	16.58	191.40
HT-VI Townships and Residential Colonies	7.42	8.82	9.12	6.89	6.47	6.75	6.51	6.49	6.26	6.47	6.63	7.33	85.16
HT - VII - Temporary Supply	2.09	2.10	1.60	1.56	1.77	1.95	1.79	1.09	1.23	1.15	0.98	1.14	18.45
HT- RESCOs													0.00
HT IX-Electric Vehicle Charging Stations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>HT Category at 132 KV</b>	<b>358.56</b>	<b>267.40</b>	<b>346.96</b>	<b>299.93</b>	<b>354.88</b>	<b>416.46</b>	<b>307.29</b>	<b>278.04</b>	<b>353.65</b>	<b>440.90</b>	<b>502.86</b>	<b>510.87</b>	<b>4437.80</b>
HT-I Industry	130.49	165.04	166.32	166.16	165.10	177.75	196.87	187.39	200.39	213.25	223.17	245.79	2237.72
HT-I (B) Ferro-Alloys	1.38	5.99	9.52	4.83	2.41	3.92	11.11	13.99	14.54	14.26	11.71	10.87	104.53
HT-II - Others	1.88	2.51	3.66	3.29	3.34	3.46	3.39	3.19	2.97	2.96	3.09	3.28	37.02
HT-III Airports, Railway and Busstations	3.49	4.01	6.41	5.70	4.09	4.11	4.05	3.99	3.47	3.53	3.85	3.68	50.37
HT-IV A Lift Irrigation & Agriculture	185.90	56.15	122.98	86.59	144.21	189.87	54.00	47.46	95.07	163.05	211.66	203.84	1560.78
HT- IV B - CP Water Supply Schemes	20.34	19.30	20.10	18.29	20.23	19.57	18.35	0.74	14.76	18.29	20.54	17.50	208.01
HT-V (A) Railway Traction	13.32	12.71	15.97	13.30	13.76	14.21	13.86	15.40	16.67	19.74	22.96	20.41	192.31
HT-V (B) HMR	1.76	1.69	2.00	1.77	1.74	3.57	5.66	5.88	5.78	5.82	5.89	5.50	47.06
HT-VI Townships and Residential Colonies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT - VII - Temporary Supply	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT- RESCOs													0.00
HT IX-Electric Vehicle Charging Stations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>2779.58</b>	<b>2924.80</b>	<b>2745.27</b>	<b>3142.13</b>	<b>3044.33</b>	<b>3003.40</b>	<b>2750.83</b>	<b>2535.65</b>	<b>3175.88</b>	<b>3739.56</b>	<b>3737.60</b>	<b>4695.65</b>	<b>38274.67</b>

2021-22

Sales / Forecast Sales (MU)	April	May	June	July	August	September	October	November	December	January	February	March	Total
<b>LT Category</b>	<b>2372.07</b>	<b>1779.57</b>	<b>1668.01</b>	<b>2044.42</b>	<b>2543.90</b>	<b>1935.61</b>	<b>2118.67</b>	<b>1406.48</b>	<b>1864.81</b>	<b>2118.73</b>	<b>2181.84</b>	<b>3000.89</b>	<b>25034.99</b>
Category I (A&B) - Domestic	958.63	947.78	817.07	781.52	783.47	744.24	770.82	678.15	642.37	634.50	652.04	924.62	9335.21
Category II (A,B,C & D) - Non-domestic/Commercial	216.62	164.78	187.97	203.26	208.34	202.38	219.36	206.03	200.81	188.03	203.63	267.13	2468.34
Category III - Industrial	72.13	62.52	70.31	75.57	74.33	69.50	71.29	75.92	85.90	79.09	76.01	79.63	892.18
Category IV (A,&B) - Cottage Industries & Agrobased Ind.	0.81	0.69	0.78	0.81	0.77	0.73	0.78	0.75	0.76	0.65	0.63	0.82	8.98
Category V (A & B ) - Agriculture	1072.59	556.24	545.39	935.44	1428.67	871.51	1004.45	394.88	882.23	1166.44	1197.77	1668.76	11724.36
Category VI (A & B) - Local Bodies, St. Lighting & PWS	39.97	37.90	36.72	37.24	37.20	36.16	39.50	37.81	39.74	38.91	38.39	42.64	462.19
Category VII (A & B) - General Purpose & Religious Places	4.97	3.97	3.88	4.27	4.42	4.48	5.14	6.17	5.85	4.05	5.90	8.21	61.31
Category VIII -Temporary Supply	6.33	5.70	5.89	6.32	6.70	6.61	7.31	6.74	7.12	7.05	7.46	9.05	82.29
Category IX-Electric Vehicle Charging Stations	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.13
<b>HT Category at 11 KV</b>	<b>508.41</b>	<b>448.51</b>	<b>441.43</b>	<b>473.92</b>	<b>488.42</b>	<b>480.72</b>	<b>480.41</b>	<b>494.57</b>	<b>492.57</b>	<b>490.57</b>	<b>483.63</b>	<b>479.04</b>	<b>5762.19</b>
HT-I Industry	332.54	296.74	302.00	322.56	327.60	321.36	310.49	331.98	336.28	338.49	336.25	316.39	3872.68
HT-I (B) Ferro-Alloys	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT-II - Others	135.34	116.92	105.71	118.81	124.66	122.62	131.28	125.50	122.18	113.95	109.92	124.74	1451.63
HT-III Airports, Railway and Busstations	0.29	0.27	0.23	0.26	0.29	0.30	0.30	0.31	0.31	0.29	0.27	0.28	3.39
HT-IV A Lift Irrigation & Agriculture	5.10	1.13	0.66	0.85	2.98	4.17	5.09	3.93	1.89	4.94	5.12	5.83	41.68
HT- IV B - CP Water Supply Schemes	11.47	10.68	10.46	10.46	10.81	10.61	10.95	11.27	10.92	11.17	10.96	10.46	130.22
HT-VI Townships and Residential Colonies	14.58	14.68	14.12	12.04	12.08	11.71	11.83	11.49	10.88	11.01	10.86	11.40	146.68
HT - VII - Temporary Supply	8.71	7.96	8.22	8.77	9.74	9.65	10.11	9.72	9.73	10.36	9.91	9.59	112.48
HT- RESCOs													0.00
HT IX-Electric Vehicle Charging Stations	0.37	0.13	0.03	0.19	0.25	0.29	0.36	0.38	0.39	0.36	0.34	0.35	3.43
<b>HT Category at 33 KV</b>	<b>509.77</b>	<b>433.45</b>	<b>431.38</b>	<b>454.04</b>	<b>472.05</b>	<b>519.39</b>	<b>524.50</b>	<b>479.30</b>	<b>484.51</b>	<b>486.09</b>	<b>499.63</b>	<b>491.95</b>	<b>5780.56</b>
HT-I Industry	405.53	340.26	340.75	358.82	375.50	417.45	419.33	374.86	380.27	383.25	398.69	390.16	4584.87
HT-I (B) Ferro-Alloys	2.72	2.01	2.51	2.41	2.32	2.40	2.21	2.36	3.81	5.02	4.49	4.82	37.08
HT-II - Others	67.70	60.46	58.28	62.64	63.27	66.11	69.94	68.05	66.49	64.09	62.35	63.31	772.70
HT-III Airports, Railway and Busstations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT-IV A Lift Irrigation & Agriculture	2.00	0.42	0.06	0.22	0.97	1.51	1.70	1.70	1.42	1.85	1.69	1.84	15.39
HT- IV B - CP Water Supply Schemes	19.86	18.38	17.74	18.49	18.05	19.55	19.29	20.54	19.32	19.16	19.93	19.38	229.68
HT-VI Townships and Residential Colonies	9.88	9.85	9.12	8.13	8.18	8.07	8.00	7.96	7.56	7.39	7.48	7.96	99.58
HT - VII - Temporary Supply	2.07	2.07	2.91	3.34	3.77	4.30	4.02	3.83	4.26	3.95	3.63	3.10	41.24
HT- RESCOs													0.00
HT IX-Electric Vehicle Charging Stations													0.00
<b>HT Category at 132 KV</b>	<b>584.95</b>	<b>326.58</b>	<b>320.64</b>	<b>437.12</b>	<b>420.76</b>	<b>566.78</b>	<b>599.96</b>	<b>520.87</b>	<b>474.98</b>	<b>546.29</b>	<b>565.62</b>	<b>576.24</b>	<b>5940.82</b>
HT-I Industry	246.89	219.12	214.36	234.27	235.32	266.18	277.72	269.05	279.21	285.38	311.64	321.55	3160.69
HT-I (B) Ferro-Alloys	12.91	8.19	14.82	15.60	12.16	14.26	15.28	18.72	17.94	25.16	29.50	26.69	211.23
HT-II - Others	3.91	3.29	3.56	3.94	3.59	3.65	3.67	3.31	3.12	2.85	2.77	3.15	40.81
HT-III Airports, Railway and Busstations	4.78	4.20	4.10	4.27	3.90	4.04	4.09	4.07	3.77	3.49	3.33	3.39	47.41
HT-IV A Lift Irrigation & Agriculture	265.57	46.38	44.59	132.91	115.39	227.76	246.09	173.79	118.14	175.08	164.24	167.81	1877.73
HT- IV B - CP Water Supply Schemes	21.05	20.06	14.57	19.30	20.23	19.96	21.72	19.58	20.54	19.66	21.08	21.01	238.75
HT-V (A) Railway Traction	23.55	21.40	21.49	21.57	24.50	25.07	25.34	26.24	26.00	28.89	27.53	27.03	298.61
HT-V (B) HMR	6.29	3.96	3.16	5.27	5.67	5.87	6.05	6.11	6.26	5.79	5.53	5.62	65.58
HT-VI Townships and Residential Colonies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT - VII - Temporary Supply	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT- RESCOs													0.00
HT IX-Electric Vehicle Charging Stations													0.00
<b>Total</b>	<b>3975.19</b>	<b>2988.12</b>	<b>2861.46</b>	<b>3409.50</b>	<b>3925.13</b>	<b>3502.50</b>	<b>3723.53</b>	<b>2901.22</b>	<b>3316.88</b>	<b>3641.69</b>	<b>3730.72</b>	<b>4548.12</b>	<b>42518.55</b>

2022-23

Sales / Forecast Sales (MU)	April	May	June	July	August	September	October	November	December	January	February	March	Total
<b>LT Category</b>	<b>2736.57</b>	<b>2096.23</b>	<b>1861.49</b>	<b>1915.64</b>	<b>2179.64</b>	<b>2090.69</b>	<b>2139.40</b>	<b>1457.88</b>	<b>1884.05</b>	<b>2117.35</b>	<b>2182.12</b>	<b>2997.90</b>	<b>25658.95</b>
Category I (A&B) - Domestic	1054.50	1071.69	919.88	782.42	835.55	767.18	814.56	716.63	678.82	670.50	689.04	977.09	9977.86
Category II (A,B,C & D) - Non-domestic/Commercial	287.38	294.66	268.70	231.92	252.09	247.63	250.61	235.38	229.42	214.82	232.63	305.18	3050.42
Category III - Industrial	80.54	80.62	77.61	71.09	73.44	58.87	74.85	79.71	90.19	83.04	79.81	83.61	933.39
Category IV (A,&B) - Cottage Industries & Agrobased Ind.	0.88	0.88	0.81	0.74	0.76	0.78	0.83	0.80	0.81	0.69	0.66	0.87	9.50
Category V (A & B ) - Agriculture	1254.20	593.19	543.47	781.87	966.33	966.33	942.77	370.64	828.06	1094.82	1124.22	1566.30	11032.21
Category VI (A & B) - Local Bodies, St. Lighting & PWS	40.48	39.11	36.01	33.57	36.34	35.82	41.48	39.70	41.73	40.86	40.31	44.77	470.19
Category VII (A & B) - General Purpose & Religious Places	9.37	7.19	6.77	6.72	7.57	6.36	6.60	7.93	7.52	5.21	7.59	10.55	89.37
Category VIII -Temporary Supply	9.18	8.86	8.21	7.27	7.53	7.68	7.68	7.08	7.48	7.40	7.83	9.51	95.70
Category IX-Electric Vehicle Charging Stations	0.03	0.03	0.03	0.03	0.03	0.04	0.01	0.01	0.02	0.02	0.02	0.02	0.30
<b>HT Category at 11 KV</b>	<b>575.66</b>	<b>545.42</b>	<b>572.09</b>	<b>493.55</b>	<b>513.76</b>	<b>533.69</b>	<b>550.07</b>	<b>565.21</b>	<b>562.77</b>	<b>559.43</b>	<b>551.13</b>	<b>547.64</b>	<b>6570.40</b>
HT-I Industry	357.54	327.54	348.81	312.32	327.21	333.89	343.81	367.72	372.50	374.97	372.48	350.41	4189.20
HT-I (B) Ferro-Alloys	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
HT-II - Others	171.83	174.24	179.78	144.92	147.16	156.56	161.25	154.16	150.08	139.97	135.02	153.22	1868.19
HT-III Airports, Railway and Busstations	0.36	0.36	0.39	0.32	0.35	0.36	0.43	0.44	0.44	0.42	0.39	0.40	4.66
HT-IV A Lift Irrigation & Agriculture	4.08	0.79	0.70	1.06	2.10	4.23	5.19	4.00	1.93	5.04	5.22	5.95	40.28
HT- IV B - CP Water Supply Schemes	11.06	11.08	11.17	10.38	10.94	11.50	12.67	13.04	12.63	12.93	12.68	12.10	142.17
HT-VI Townships and Residential Colonies	18.58	19.70	18.80	13.69	13.60	14.14	13.31	12.92	12.24	12.38	12.21	12.82	174.38
HT - VII - Temporary Supply	11.75	11.27	11.97	10.43	11.58	12.58	13.01	12.51	12.53	13.34	12.76	12.35	146.10
HT- RESCOs													0.00
HT IX-Electric Vehicle Charging Stations	0.45	0.45	0.47	0.42	0.41	0.44	0.39	0.42	0.42	0.40	0.37	0.39	5.02
<b>HT Category at 33 KV</b>	<b>593.79</b>	<b>581.62</b>	<b>600.97</b>	<b>565.41</b>	<b>568.73</b>	<b>594.32</b>	<b>699.18</b>	<b>649.51</b>	<b>655.01</b>	<b>656.56</b>	<b>671.48</b>	<b>663.12</b>	<b>7499.69</b>
HT-I Industry	462.26	443.28	456.07	435.94	436.60	453.63	575.56	526.65	534.11	537.38	554.37	545.01	5960.88
HT-I (B) Ferro-Alloys	6.85	6.48	6.48	4.89	2.73	2.44	2.43	2.60	4.19	5.53	4.93	5.31	54.86
HT-II - Others	88.63	95.13	102.23	91.71	95.85	102.48	82.60	80.42	78.63	75.87	73.87	74.98	1042.40
HT-III Airports, Railway and Busstations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT-IV A Lift Irrigation & Agriculture	0.85	0.39	0.07	0.53	1.16	1.77	1.73	1.73	1.45	1.89	1.73	1.88	15.18
HT- IV B - CP Water Supply Schemes	19.48	21.00	21.10	20.43	20.10	20.62	23.15	24.65	23.19	22.99	23.91	23.25	263.89
HT-VI Townships and Residential Colonies	12.57	13.27	12.70	9.10	9.24	9.65	9.48	9.44	8.96	8.76	8.86	9.43	121.46
HT - VII - Temporary Supply	3.15	2.06	2.31	2.80	3.06	3.73	4.22	4.02	4.47	4.14	3.81	3.26	41.03
HT- RESCOs													0.00
HT IX-Electric Vehicle Charging Stations													0.00
<b>HT Category at 132 KV</b>	<b>502.88</b>	<b>476.50</b>	<b>453.94</b>	<b>440.22</b>	<b>655.25</b>	<b>572.01</b>	<b>756.55</b>	<b>659.88</b>	<b>604.53</b>	<b>686.61</b>	<b>711.63</b>	<b>725.28</b>	<b>7245.29</b>
HT-I Industry	355.57	344.54	351.58	334.21	318.72	332.79	345.42	335.11	346.93	354.74	387.01	398.83	4205.45
HT-I (B) Ferro-Alloys	23.48	21.87	4.11	9.18	13.39	21.56	15.59	19.10	18.30	25.66	30.09	27.22	229.55
HT-II - Others	4.44	4.49	4.76	3.75	3.76	3.90	4.05	3.65	3.44	3.15	3.05	3.47	45.91
HT-III Airports, Railway and Busstations	3.57	5.83	5.74	5.26	5.41	5.15	4.29	4.27	3.96	3.67	3.50	3.56	54.20
HT-IV A Lift Irrigation & Agriculture	58.73	42.42	27.15	32.49	257.61	145.67	296.07	209.08	142.13	210.64	197.59	201.89	1821.45
HT- IV B - CP Water Supply Schemes	20.49	19.62	22.14	20.94	21.11	22.68	24.93	22.47	23.57	22.56	24.20	24.12	268.84
HT-V (A) Railway Traction	29.54	30.79	31.11	27.46	28.15	32.71	58.03	58.03	58.03	58.03	58.03	58.03	527.97
HT-V (B) HMR	7.06	6.93	7.36	6.93	7.08	7.56	8.17	8.17	8.17	8.17	8.17	8.17	91.93
HT-VI Townships and Residential Colonies													0.00
HT - VII - Temporary Supply													0.00
HT- RESCOs													0.00
HT IX-Electric Vehicle Charging Stations													0.00
<b>Total</b>	<b>4408.90</b>	<b>3699.76</b>	<b>3488.49</b>	<b>3414.81</b>	<b>3917.38</b>	<b>3790.71</b>	<b>4145.20</b>	<b>3332.49</b>	<b>3706.36</b>	<b>4019.95</b>	<b>4116.36</b>	<b>4933.93</b>	<b>46974.33</b>

## Annexure II(A) - Number of consumers - TSSPDCL

Category	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23 H1
<b>Low Tension</b>							
LT I: Domestic	5,426,404	5,653,288	6,158,298	6,542,568	6,817,306	7,121,821	7,267,957
LT II: Non-Domestic/Commercial	748,920	784,766	826,217	873,555	904,559	1,010,316	1,050,983
LT III: Industry	41,373	42,004	42,920	43,778	44,492	44,611	44,780
LT IV: Cottage Industries	3,778	3,930	4,075	4,243	4,354	4,410	4,488
LT V: Agriculture	1,020,863	1,068,811	1,115,775	1,145,031	1,190,930	1,262,600	1,286,830
LT VI: Street Lightng & PWS	69,878	71,369	73,430	105,304	104,891	106,561	107,224
LT VI (A): Street Lighting	43,859	45,114	46,498	69,024	71,714	72,927	73,327
LT VI (B): PWS Schemes	26,019	26,255	26,932	36,280	33,177	33,634	33,897
LT VII: General	22,236	21,998	22,196	22,934	23,176	23,724	24,273
LT VII (A): General Purpose	18,104	18,173	18,153	18,901	19,165	19,573	19,881
LT VII (B): Religious Places	4,132	3,825	4,043	4,033	4,011	4,151	4,392
LT VIII: Temporary Supply	162	313	1,828	4,272	7,589	10,536	11,187
LT IX: EV Charging Stations				3	19	53	81
<b>Total LT</b>	<b>7,333,614</b>	<b>7,646,479</b>	<b>8,244,739</b>	<b>8,741,688</b>	<b>9,097,316</b>	<b>9,584,632</b>	<b>9,797,803</b>
<b>High Tension</b>							
<b>HT Category at 11 kv</b>	<b>7,591</b>	<b>8,080</b>	<b>8,611</b>	<b>9,052</b>	<b>9,382</b>	<b>13,216</b>	<b>10,481</b>
HT I (A): General	4,240	4,473	4,692	4,869	4,984	7,566	5,461
HT I (B): Ferro Alloy Units	1	1	-	-	-	-	1
HT II: Others	2,895	3,101	3,292	3,500	3,612	4,475	4,080
HT III: Airports, Bus Stations and Railway Stations	9	9	10	10	10	12	11
HT IV Government LIS & Agl.	137	136	140	137	132	160	129
HT IV CPWS	73	85	127	133	131	138	123
HT VI: Townships & Residential Colonies	115	128	141	156	167	195	185
HT VII: Temporary	121	147	209	245	294	617	437
HT IX: EV Charging Stations				2	3	3	5

<b>HMWS</b>						49	50	49
<b>HT Category at 33 kv</b>	<b>487</b>	<b>532</b>	<b>574</b>	<b>549</b>	<b>550</b>	<b>696</b>	<b>607</b>	
HT I (A): General	341	357	371	352	357	469	381	
HT I (B): Ferro Alloy Units	-	1	2	2	1	5	4	
HT II: Others	118	136	145	141	132	155	161	
HT III: Airports, Bus Stations and Railway Stations	-	-	-	-	-	-	-	
HT IV Government LIS & Agl.	16	19	19	19	19	20	19	
HT IV CPWS	1	5	13	13	13	14	13	
HT VI: Townships & Residential Colonies	11	12	15	17	20	20	21	
HT VII: Temporary	-	2	9	5	4	9	7	
<b>HMWS</b>						4	4	1
<b>HT Category at 132 kv</b>	<b>64</b>	<b>65</b>	<b>74</b>	<b>75</b>	<b>78</b>	<b>85</b>	<b>83</b>	
HT I (A): General	36	37	38	37	33	39	35	
HT I (B): Ferro Alloy Units	2	1	2	2	1	3	6	
HT II: Others	6	4	5	5	4	4	4	
HT III: Airports, Bus Stations and Railway Stations	1	1	1	1	1	-	1	
HT IV Government LIS & Agl.	13	13	14	15	18	18	19	
HT IV CPWS	-	-	2	2	2	2	2	
HT V(A): Railway Traction	6	6	8	9	9	9	10	
HT V(B): HMR Traction		3	4	4	4	4	4	
HT VI: Townships & Residential Colonies		-	-	-	-	-	-	
HT VII: Temporary		-	-	-	-	-	-	
<b>HMWS</b>						6	6	2
<b>Total HT</b>	<b>8,142</b>	<b>8,677</b>	<b>9,259</b>	<b>9,676</b>	<b>10,010</b>	<b>13,997</b>	<b>11,171</b>	
<b>Total (LT + HT)</b>	<b>7,341,756</b>	<b>7,655,156</b>	<b>8,253,998</b>	<b>8,751,364</b>	<b>9,107,326</b>	<b>9,598,629</b>	<b>9,808,974</b>	

## Annexure II(B) - Connected Load - TSSPDCL

Category	Units	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23 H1
<b>Low Tension</b>								
LT I: Domestic	MVA	6,419.84	7,077.87	7,835.43	8,636.20	9,301.48	10,066.61	10,465.73
LT II: Non-Domestic/Commercial	MVA	2,119.06	2,347.85	2,472.88	2,724.92	2,860.64	3,227.92	3,415.95
LT III: Industry	HP	1,129,483.46	1,156,540.00	1,193,640.00	1,251,270.00	1,286,350.00	1,323,170.00	1,343,639.86
LT IV: Cottage Industries	HP	14,221.35	14,920.00	20,530.00	16,360.00	16,740.00	17,150.00	17,500.00
LT V: Agriculture	HP	4,911,326.63	5,287,160.00	5,522,129.74	5,668,800.00	5,898,650.00	6,257,330.00	6,378,690.00
LT VI: Street Lightng & PWS	MVA	125,063.10	129,363.77	132,746.62	161,523.49	145,822.10	148,106.70	149,497.34
LT VI (A): Street Lighting	MVA	120.41	123.77	126.62	163.49	162.25	166.7	167.34
LT VI (B): PWS Schemes	HP	124,942.69	129,240.00	132,620.00	161,360.00	145,659.85	147,940.00	149,330.00
LT VII: General	MVA	43.59	49.69	53.07	58.88	62.42	65.41	68.28
LT VII (A): General Purpose	MVA	40.2	45.83	48.67	54.18	57.45	59.85	62.09
LT VII (B): Religious Places	MVA	3.39	3.86	4.4	4.7	4.97	5.56	6.19
LT VIII: Temporary Supply	MVA	1.2	2.61	18.39	37.65	59.95	87.51	92.91
LT IX: EV Charging Stations	MVA				0.05	0.38	0.87	1.3
<b>Total LT</b>		<b>6,188,678.24</b>	<b>6,597,461.80</b>	<b>6,879,426.14</b>	<b>7,109,411.19</b>	<b>7,359,846.97</b>	<b>7,759,205.02</b>	<b>7,903,371.38</b>
<b>High Tension</b>								
<b>HT Category at 11 kv</b>		<b>2,083.08</b>	<b>2,200.90</b>	<b>2,363.29</b>	<b>2,519.47</b>	<b>2,623.56</b>	<b>3,346.54</b>	<b>2,863.14</b>
HT I (A): General	MVA	1,249.07	1,302.88	1,378.85	1,456.61	1,546.93	2,024.97	1639.88412
HT I (B): Ferro Alloy Units	MVA	0.25	0.25	-	-	-	-	0.07
HT II: Others	MVA	701.25	750.86	790.85	850.2	829.76	994.92	941.85054
HT III: Airports, Bus Stations and Railway Stations	MVA	1.62	1.62	1.69	1.69	1.94	2.07	1.815
HT IV Government LIS & Agl.	MVA	46.64	47.63	47.94	47.51	48.13	55.02	47.9882
HT IV CPWS	MVA	20.72	22.95	38.39	40.22	39.39	40.39	37.966
HT VI: Townships & Residential Colonies	MVA	43.03	48.98	56.43	65.86	77.14	89.15	90.474
HT VII: Temporary	MVA	20.51	25.75	49.15	54.89	65.22	124.97	88.23
HT IX: EV Charging Stations	MVA				2.5	2.6	2.6	2.81

<b>HMWS</b>	MVA					12.47	12.45	12.0495
<b>HT Category at 33 kv</b>		<b>1,348.14</b>	<b>1,433.45</b>	<b>1,587.11</b>	<b>1,630.92</b>	<b>1,671.02</b>	<b>2,010.18</b>	<b>1,827.80</b>
HT I (A): General	MVA	1,031.69	1,058.75	1,133.39	1,141.67	1,144.98	1,430.47	1,210.90
HT I (B): Ferro Alloy Units	MVA	-	4	8	8	4	21.17	9.5
HT II: Others	MVA	254.14	283.37	304.63	338.43	360.12	382.71	434.17
HT III: Airports, Bus Stations and Railway Stations	MVA	-	-	-	-	-	-	-
HT IV Government LIS & Agl.	MVA	34.66	42.91	42.91	42.91	42.91	44.91	43.98
HT IV CPWS	MVA	1.65	7.51	43.75	43.75	43.75	46.76	43.75
HT VI: Townships & Residential Colonies	MVA	26.01	30.41	36.31	43.81	51.71	53.21	59.71
HT VII: Temporary	MVA	-	6.5	18.12	12.35	15.4	20.8	17.8
<b>HMWS</b>	MVA					8.15	10.15	8
<b>HT Category at 132 kv</b>		<b>1,593.66</b>	<b>1,625.36</b>	<b>1,796.55</b>	<b>1,812.72</b>	<b>2,316.25</b>	<b>2,512.51</b>	<b>2,498.25</b>
HT I (A): General	MVA	516.91	561.56	594.27	597.04	497.17	638.13	582.77
HT I (B): Ferro Alloy Units	MVA	26.5	18	47	45.2	25.2	62.2	143.2
HT II: Others	MVA	25	17.3	17.37	17.07	17.07	17.57	21.17
HT III: Airports, Bus Stations and Railway Stations	MVA	11	11	15	15	11	11	15
HT IV Government LIS & Agl.	MVA	931.25	931.25	954.41	960.41	1,450.41	1,450.41	1,484.41
HT IV CPWS	MVA	-	-	64.75	64.75	64.75	64.75	64.75
HT V(A): Railway Traction	MVA	83	78	88	96	95.5	107	115
HT V(B): HMR Traction	MVA	-	8.25	15.75	17.25	18.25	18.25	18.25
HT VI: Townships & Residential Colonies	MVA	-	-	-	-	-	-	-
HT VII: Temporary	MVA	-	-	-	-	-	-	-
HMWS	MVA					136.9	143.2	53.7
<b>Total HT</b>		<b>5,024.89</b>	<b>5,259.71</b>	<b>5,746.95</b>	<b>5,963.11</b>	<b>6,610.82</b>	<b>7,869.23</b>	<b>7,189.19</b>
<b>Total (LT + HT)</b>		<b>6,193,703.12</b>	<b>6,602,721.51</b>	<b>6,885,173.09</b>	<b>7,115,374.30</b>	<b>7,366,457.79</b>	<b>7,767,074.25</b>	<b>7,910,560.56</b>



### Annexure- III

LIS LOADS FOR 2023-24 (01.04.2023 to 31.03.2024)

Sl.No.	ITEM	No. of pumps	Total connected load of pumping station in MW	Simultaneous load of pumping station in MW	Load in MW which can come on Telangana state power grid in MW												TOTAL
					April. 2023	May. 2023	June. 2023	July. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023	Jan. 2024	Feb. 2024	Mar. 2024	
1	Existing loads of pumping stations already in service on Krishna river	50	832.50	499.50	24.84	24.84	24.84	148.02	149.94	194.04	289.14	289.14	281.34	195.54	104.64	24.84	
2	Existing loads of pumping stations already in service on Godavari river	265	7322.00	4393.22	0.00	0.00	325.80	622.79	675.28	879.39	1069.21	1512.37	1754.15	1747.50	1126.77	626.14	
	<b>Total load of inservice pumping stations</b>	<b>315</b>	<b>8154.50</b>	<b>4892.72</b>	<b>24.84</b>	<b>24.84</b>	<b>350.64</b>	<b>770.81</b>	<b>825.22</b>	<b>1073.43</b>	<b>1358.35</b>	<b>1801.51</b>	<b>2035.49</b>	<b>1943.04</b>	<b>1231.41</b>	<b>650.98</b>	
	<b>Energy in MU / month(Assumed 24Hrs X 30 days - Running)</b>				<b>17.88</b>	<b>17.88</b>	<b>252.46</b>	<b>554.98</b>	<b>594.16</b>	<b>772.87</b>	<b>978.01</b>	<b>1297.09</b>	<b>1465.55</b>	<b>1398.99</b>	<b>886.62</b>	<b>468.71</b>	<b>8705.20</b>
1	Under Execution Pumping Stations on Krishna River	36	4804.00	2882.40	0.00	0.00	0.00	284.16	568.32	568.32	846.72	835.20	840.96	278.40	278.40	0.00	
2	Under Execution Pumping Stations on Godavari River	109	3368.10	2020.86	0.00	0.00	0.00	294.96	649.92	944.88	1074.48	589.92	294.96	294.96	0.00	0.00	
	<b>Total load of under Execution pumping stations</b>	<b>145</b>	<b>8172.10</b>	<b>4903.26</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>579.12</b>	<b>1218.24</b>	<b>1513.20</b>	<b>1921.20</b>	<b>1425.12</b>	<b>1135.92</b>	<b>573.36</b>	<b>278.40</b>	<b>0.00</b>	
	<b>Energy in MU / month(Assumed 24Hrs X 30 days - Running)</b>				<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>416.97</b>	<b>877.13</b>	<b>1089.50</b>	<b>1383.26</b>	<b>1026.09</b>	<b>817.86</b>	<b>412.82</b>	<b>200.45</b>	<b>0.00</b>	<b>6224.08</b>
	<b>Total load of all pumping stations</b>	<b>460</b>	<b>16326.60</b>	<b>9795.98</b>	<b>24.84</b>	<b>24.84</b>	<b>350.64</b>	<b>1349.93</b>	<b>2043.46</b>	<b>2586.63</b>	<b>3279.55</b>	<b>3226.63</b>	<b>3171.41</b>	<b>2516.40</b>	<b>1509.81</b>	<b>650.98</b>	
	<b>Energy in MU / month(Assumed 24Hrs X 30 days - Running)</b>				<b>17.88</b>	<b>17.88</b>	<b>252.46</b>	<b>971.95</b>	<b>1471.29</b>	<b>1862.37</b>	<b>2361.28</b>	<b>2323.17</b>	<b>2283.42</b>	<b>1811.81</b>	<b>1087.06</b>	<b>468.71</b>	<b>14929.29</b>

**POWER REQUIRED IN MW (Megawatt) Note :One MW= 1000 KW (Kilowatt)  
PUMPING STATIONS IN SERVICE ON KRISHNA RIVER IN TELANGANA STATE**

<b>A Pumping stations already in service on Krishna river</b>																			
Sl.No	Name of Pumping Station	Rating of each Motor in MW	Average recorded load of each pump in MW	No. of pumps	Total installed load of pumping station in MW	Total recorded load of pumping station in MW	Substation Voltages	Load in MW which can come on Telangana State power grid during April 2023 to March 2024											
								April. 2023	May. 2023	June. 2023	July. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023	Jan. 2024	Feb. 2024	Mar. 2024
1	<b>Kalwakurthy Lift Irrigation Scheme</b>																		
	a) Stage-1 Pumping station	30.00	27.00	5	150.00	135.00	220KV	27.00	27.00	27.00	54.00	54.00	54.00	81.00	81.00	81.00	54.00	54.00	27.00
	b) Stage-2 Pumping station	30.00	25.00	5	150.00	125.00		-----	-----	-----	50.00	50.00	50.00	75.00	75.00	75.00	50.00	50.00	
	c) Stage-3 Pumping station	30.00	28.00	5	150.00	140.00		-----	-----	-----	56.00	56.00	56.00	84.00	84.00	84.00	56.00	56.00	
2	<b>Bheema Lift-1 Irrigation Scheme</b>																		
	a) Stage-1 Pumping station	12.00	10.00	3	36.00	30.00	132 KV	-----	-----	-----	10.00	10.00	20.00	20.00	20.00	20.00	20.00	-----	-----
	b) Stage-2 Pumping station	4.00	3.40	3	12.00	10.20		-----	-----	-----	3.40	3.40	6.80	6.80	6.80	20.00	20.00	-----	-----
3	<b>Bheema Lift-2 Irrigation Scheme</b>																		
	a) Stage-1 Pumping station	12.00	9.50	3	36.00	28.50	132KV	-----	-----	-----	9.50	9.50	19.00	19.00	19.00	20.00	20.00	-----	-----
	b) Stage-2 Pumping station	4.00	3.20	3	12.00	9.60		-----	-----	-----	3.20	3.20	6.40	6.40	6.40	6.40	6.40	-----	-----
4	<b>Nettampad Lift Irrigation Scheme</b>																		
	a) Stage-1 Pumping station	17.00	15.00	4	68.00	60.00	220KV	-----	-----	-----	15.00	15.00	15.00	30.00	30.00	30.00	20.00	-----	-----
	b) Stage-2 Pumping station	17.00	14.00	3	51.00	42.00		-----	-----	-----	14.00	14.00	14.00	28.00	28.00	14.00	14.00	-----	-----

<b>A Pumping stations already in service on Krishna river</b>																			
Sl.No	Name of Pumping Station	Rating of each Motor in MW	Average recorded load of each pump in MW	No. of pumps	Total installed load of pumping station in MW	Total recorded load of pumping station in MW	Substation Voltages	Load in MW which can come on Telangana State power grid during April 2023 to March 2024											
								April. 2023	May. 2023	June. 2023	July. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023	Jan. 2024	Feb. 2024	Mar. 2024
5	<b>Koilsagar Lift Irrigation Scheme</b>																		
	a) Stage-1 Pumping station	7.50	6.00	2	15.00	12.00	132KV	-----	-----	-----	6.00	6.00	12.00	12.00	12.00	12.00	6.00	-----	-----
	b) Stage-2 Pumping station	7.50	6.00	2	15.00	12.00		-----	-----	-----	6.00	6.00	12.00	12.00	12.00	12.00	6.00	-----	-----
6	AMR Lift irrigation scheme	18.00	14.40	4	72.00	57.60	220KV	14.40	14.40	14.40	14.40	14.40	43.20	57.60	57.60	57.60	28.00	14.40	14.40
7	AMR Low Level Canal lift irrigation scheme (3 x 4)	4.00	3.20	3	12	9.6		-----	-----	-----	-----	3.20	6.40	9.60	9.60	9.60	3.20		-----
8	Thummilla pumping station in Mahabunagar district																		
	a) Phase 1	5.50	5.20	2	11.00	10.40	132KV	-----	-----	-----	5.20	5.20	5.20	10.50	10.50	10.50	5.50	-----	-----
	b) Phase 2	10.50	9.50	1	10.50	9.50		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
9	Uday samudrum Lift scheme	16.00	15.00	2	32.00	30.00	220KV	-----	-----	-----	-----	-----	-----	30.00	30.00	30.00	30.00	-----	-----
	<b>Total load of Pumping stations</b>			<b>50.00</b>	<b>832.50</b>	<b>721.40</b>		<b>41.40</b>	<b>41.40</b>	<b>41.40</b>	<b>246.70</b>	<b>249.90</b>	<b>320.00</b>	<b>481.90</b>	<b>481.90</b>	<b>482.10</b>	<b>339.10</b>	<b>174.40</b>	<b>41.40</b>
	Simultaneous load on power grid wil be 60% of recorded load				<b>499.50</b>	<b>432.84</b>		<b>24.84</b>	<b>24.84</b>	<b>24.84</b>	<b>148.02</b>	<b>149.94</b>	<b>192.00</b>	<b>289.14</b>	<b>289.14</b>	<b>289.26</b>	<b>203.46</b>	<b>104.64</b>	<b>24.84</b>

**POWER REQUIREMENT OF PUMPING STATIONS ( IN SERVICE) ON GODAVARI RIVER IN TELANGANA STATE**

<b>B Pumping stations already in service on Godavari river</b>																			
Si. No	Name of Pumping station	Rating of each Motor in MW	Average recorded load of each pump	No. of pumps	Total connecte d load of pumping station in MW	Total recorde d load of pumpin g station	Substation Voltages	Load in MW which can come on Telangana State power grid during April 2023 to March 2024											
								April. 2023	May. 2023	June 2023	July. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023	Jan. 2024	Feb. 2024	Mar. 2024
<b>A Devadula lift scheme</b>																			
1	Intake pump house Gangaram, Bhupalpally district																		
	a) In Phase-I to pump water to Bhimghnpur P.S	8.50	7.00	2	17.00	14.00	220 KV	----	----	----	14.00	14.00	14.00	14.00	14.00	14.00	14.00	7.00	7.00
	b) In Phase-II to pump water to Bhimghnpur P.S	12.80	10.50	2	25.60	21.00		----	----	----	21.00	21.00	21.00	21.00	21.00	21.00	21.00	10.50	10.50
	c) In Phase-III to pump water to Bhimghnpur P.S	16.00	13.00	6	96.00	78.00		----	----	----	26.00	26.00	52.00	52.00	52.00	39.00	26.00	13.00	13.00
2	BHIMGHANPUR Pumping station, Bhupalpally district																		
	a) In Phase-I to pump water to pulkurthy p.s	8.50	6.80	2	17.00	13.60	220 KV	----	----	----	13.60	13.60	13.60	13.60	13.60	13.60	13.60	6.80	6.80
	b) In Phase-II to pump water to shalivagu P.S	11.75	9.40	2	23.50	18.80		----	----	----	18.80	18.80	18.80	18.80	18.80	18.80	18.80	9.40	9.40
	c) At Bheemghanpur P.S in pahse -3 stag-2	22.00	17.60	3	66.00	52.80		----	----	----	35.20	35.20	35.20	35.20	35.20	35.20	35.20	17.60	17.60
3	Pulakurthy Pumping station in warangal district In Phase-1 to pump water	6.00	4.80	2	12.00	9.60	220 KV	----	----	----	9.60	9.60	9.60	9.60	9.60	9.60	9.60	4.80	4.80
4	Shalivagu Pumping station in warangal district In Phase-II to pump water to Dharmasagar P.S	12.50	10.00	2	25.00	20.00	220 KV	----	----	----	20.00	20.00	20.00	20.00	20.00	20.00	20.00	10.00	10.00
5	Dharmasagar Pumping station in Waranagal district under execution																		
	a) In Phase-I to pump water to R.S ghanpur P.S	3.00	2.40	2	6.00	4.80	132 KV	----	----	----	4.80	4.80	4.80	4.80	4.80	4.80	4.80	2.40	2.40

Sl. No	Name of Pumping station	Rating of each Motor in MW	Average recorded load of each pump	No. of pumps	Total connected load of pumping station in MW	Total recorded load of pumping station	Substation Voltages	Load in MW which can come on Telangana State power grid during April 2023 to March 2024											
								April. 2023	May. 2023	June 2023	July. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023	Jan. 2024	Feb. 2024	Mar. 2024
	b) In Phase-II to pump water to R.S ghanpur P.S	13.60	10.88	2	27.20	21.76		----	----	----	21.76	21.76	21.76	21.76	21.76	21.76	10.88	10.88	
	d) In Phase-III to pump water to Gandiramaram P.S	5.50	4.40	2	11.00	8.80		----	----	----	8.80	8.80	8.80	8.80	8.80	8.80	4.40	4.40	
	e) At Dharmasagar P.S in phase-3 stag-3																		
	i) Phase 1	31.00	24.80	3	93.00	74.40	220 KV	----	----	----	24.80	24.80	24.80	24.80	24.80	24.80	24.80	24.40	
	ii) Phase 2	4.30	3.44	2	8.60	6.88		----	----	----	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	
6	R.S ghanpur Pumping station in Waranagal district																		
	a) To pump water to aswaraopally Tank in Phase-II	3.50	2.80	2	7.00	5.60	132 KV	----	----	----	5.60	5.60	5.60	5.60	5.60	5.60	2.80	2.80	
	b) To pump water to aswaraopally Tank in Phase-II	1.27	1.00	2	2.54	2.00		----	----	----	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	
7	Gandiramaram Pumping station in Waranagal																		
	a) To pump water to Bommakur P.S in phase-II	4.00	3.20	2	8.00	6.40	132 KV	----	----	----	6.40	6.40	6.40	6.40	6.40	6.40	3.20	3.20	
	b) To pump water to Bommakur P.S in phase-III	4.81	3.85	2	9.62	7.70		----	----	----	7.70	7.70	7.70	7.70	7.70	7.70	3.85	3.85	
8	Bhommukur Pumping station in Waranagal district																		
	a) To pump water to Tapaspally tank in phase-II	3.5	2.80	2	7.00	5.60	132 KV	----	----	----	5.60	5.60	5.60	5.60	5.60	5.60	2.80	2.80	
	b) To pump water to Tapaspally tank in phase-III	7.62	6.10	2	15.24	12.19		----	----	----	12.19	12.19	12.19	12.19	12.19	12.19	6.10	6.10	

Sl. No.	Name of Pumping station	Rating of each Motor in MW	Average recorded load of each pump	No. of pumps	Total connected load of pumping station in MW	Total recorded load of pumping station	Substation Voltages	Load in MW which can come on Telangana State power grid during April 2023 to March 2024											
								April. 2023	May. 2023	June 2023	July. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023	Jan. 2024	Feb. 2024	Mar. 2024
9	<b>Ramappa pumping station</b>																		
	a) To pump water to rangaih cheruvu in phase-III	5.07	4.06	2	10.14	8.11	132 KV	----	----	----	8.11	8.11	8.11	8.11	8.11	8.11	8.11	4.06	4.06
	b) To pump water to pakala cheruvu in phase-III	6.00	4.80	2	12.00	9.60		----	----	----	9.60	9.60	9.60	9.60	9.60	9.60	9.60	4.80	4.80
	<b>B Yellampally lift scheme</b>																		
10	<b>Vemunur pumping station in Karimnagar district</b>	10.50	8.40	4	42.00	33.60	220 KV	----	----	----	----	----	----	----	----	----	----	----	----
11	<b>Medaram pumping station in Karimnagar district</b>	15.95	12.76	4	63.80	51.04	220 KV	----	----	----	25.52	25.52	25.52	25.52	25.52	8.00	127.60	----	----
12	<b>Gangadhara pumping station in Karimnagar district</b>	6.88	5.50	4	27.52	22.02	132 KV	----	----	----	11.01	16.51	16.51	11.01	11.01	11.00	11.00	----	----
13	<b>Jogapur Lift scheme station</b>																		
	a) Pumping station-1 to pump water to jogapur Ridge	2.90	2.32	4	11.60	9.28	132 KV	----	----	----	4.64	6.96	6.96	4.64	4.64	2.32	2.32	----	----
	a) Pumping station-1 to pump water to NT 450	1.00	1.00	2	2.00	2.00		----	----	----	2.00	2.00	2.00	2.00	2.00	2.00	2.00	----	----
	<b>C Miscellaneous lift Schemes pumping stations</b>																		
14	<b>Kadam pumping station Adilabad dist...</b>	4.10	3.28	2	8.20	6.56	132 KV	----	----	----	6.56	6.56	6.56	6.56	6.56	3.28	3.28	----	----

Sl. No.	Name of Pumping station	Rating of each Motor in MW	Average recorded load of each pump	No. of pumps	Total connected load of pumping station in MW	Total recorded load of pumping station	Substation Voltages	Load in MW which can come on Telangana State power grid during April 2023 to March 2024											
								April. 2023	May. 2023	June 2023	July. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023	Jan. 2024	Feb. 2024	Mar. 2024
15	Manthani pumping station in Karimnagar district																		
	a) Stage-1 pumping station	2.00	1.60	2	4.00	3.20	132 KV	----	----	----	3.20	3.20	3.20	3.20	3.20	1.60	1.60	----	----
	b) Stage-2 pumping station	2.00	1.60	2	4.00	3.20		----	----	----	3.20	3.20	3.20	3.20	3.20	1.60	1.60	----	----
16	NTPC pumping station in Karimnagar dist.	3.40	2.72	4	13.60	10.88	132 KV	----	----	----	5.44	5.44	5.44	5.44	5.44	2.72	2.72	----	----
17	Rajanarsimha ( Singur) lift Scheme Pumping station in Medak district	0.40	0.32	4	1.60	1.28	132 KV	----	----	----	0.64	0.64	0.64	0.64	0.64	0.32	0.32	----	----
18	Muktheswaer Pumping station near kaleswaram in Karim nagar district																		
	a) Phase-1, Stag-1 pumping station	2.20	1.76	1	2.20	1.76	132 KV	----	----	----	1.76	1.76	1.76	1.76	1.76	1.76	1.76	----	----
	b) Phase-1, Stag-2 pumping station	8.50	6.80	2	17.00	13.60		----	----	----	13.60	13.60	13.60	13.60	13.60	6.80	6.80	----	----
	c) Phase-2, lift-1 pumping station	0.30	0.24	1	0.30	0.24		----	----	----	0.24	0.24	0.24	0.24	0.24	0.24	0.24	----	----
	d) Phase-2, lift-2 pumping station	2.20	1.76	1	2.20	1.76		----	----	----	1.76	1.76	1.76	1.76	1.76	1.76	1.76	----	----
	e)Phase-2, lift-3 pumping station	2.90	2.32	1	2.90	2.32		----	----	----	2.32	2.32	2.32	2.32	2.32	2.32	2.32	----	----
	f) Phase-2, lift-4 pumping station	1.65	1.32	1	1.65	1.32		----	----	----	1.32	1.32	1.32	1.32	1.32	1.32	1.32	----	----
19	<b>Bhaktha Ramadas Pumping station</b>	10.50	8.40	2	21.00	16.80	132 KV	----	----	----	8.40	16.80	16.80	16.80	16.80	8.40	8.40	----	----
20	<b>Kodimal lift irrigation scheme</b>	1.19	0.95	2	2.38	1.90	132 KV	----	----	----	1.90	1.90	1.90	1.90	1.90	0.95	0.95	----	----
21	<b>Alisagar Lift irrigation scheme</b>																		
	a) Stage-1 pumping station	2.30	1.84	4	9.20	7.36	132 KV	----	----	----	1.84	3.68	3.68	3.68	5.52	5.52	3.68	3.68	3.68



Sl. No.	Name of Pumping station	Rating of each Motor in MW	Average recorded load of each pump	No. of pumps	Total connected load of pumping station in MW	Total recorded load of pumping station	Substation Voltages	Load in MW which can come on Telangana State power grid during April 2023 to March 2024												
								April. 2023	May. 2023	June 2023	July. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023	Jan. 2024	Feb. 2024	Mar. 2024	
									a) Stage-2 pumping station	2.85	2.28	4	11.40	9.12		----	----	----	2.28	4.56
	a) Stage-3 pumping station	1.20	0.96	4	4.80	3.84		----	----	----	0.96	1.92	1.92	1.92	2.88	2.88	1.92	1.92	1.92	
22	<b>Guthpa Lift irrigation scheme</b>																			
	a) Stage-1 pumping station	2.25	1.80	2	4.50	3.60	132 KV	----	----	----	1.80	3.60	3.60	3.60	3.60	3.60	3.60	3.60	1.80	
	a) Stage-2 pumping station	1.73	1.38	2	3.46	2.77		----	----	----	1.38	2.77	2.77	2.77	1.38	2.77	2.77	2.77	1.38	
23	Goravelli ( Totapalli) lift scheme in Karimnagar district	32.00	25.60	3	96.00	76.80	132 KV	----	----	----	----	----	----	----	----	----	25.60	25.60	----	
25	Chanaka-Korata Lift Irrigation scheme in Adilabad																			
	a) Phase 1	12.00	9.60	3	36.00	28.80	132 KV	----	----	----	----	9.60	9.60	9.60	8.60	9.60	8.60	----	----	
	b) Phase 2	5.50	4.40	3	16.50	13.20	132 KV	----	----	----	----	4.40	4.40	4.40	4.40	4.40	4.40	----	----	
<b>D</b>	<b>Kaleswaram lift Scheme pumping stations</b>																			
26	Medigadda Pumping Station in combined Karimnagar	40.00	27.00	17	680.00	459.00	220 KV	----	----	----	27.00	27.00	27.00	27.00	81.00	81.00	81.00	81.00	54.00	
27	Annaram Pumping Station in combined Karimnagar	40.00	25.00	12	480.00	300.00	220 KV	----	----	----	25.00	25.00	25.00	25.00	75.00	75.00	75.00	75.00	50.00	
28	Sundilla Pumping Station in combined Karimnagar	40.00	31.00	14	560.00	434.00	220 KV	----	----	----	31.00	31.00	31.00	31.00	93.00	93.00	93.00	93.00	62.00	
29	Medaram Pumping Station (Pkg-06) in combined Karimnagar District	124.40	116.00	7	870.80	812.00	400 KV	----	----	113.00	113.00	113.00	113.00	232.00	348.00	464.00	464.00	348.00	232.00	
30	Ramadugu Pumping Station (Pkg-08) in combined Karimnagar District	139.00	125.00	7	973.00	875.00	400 KV	----	----	125.00	125.00	125.00	125.00	250.00	375.00	500.00	500.00	375.00	125.00	
31	Ananthagiri Pumping Station (Pkg-10) at Thippapur P.S	106.00	85.00	4	424.00	340.00	400 KV	----	----	85.00	85.00	85.00	170.00	170.00	255.00	255.00	255.00	190.00	85.00	
32	Ranganayak sagar Pumping Station (Pkg-11) at Chandiapur P.S	134.50	107.00	4	538.00	428.00	400 KV	----	----	107.00	107.00	107.00	214.00	214.00	321.00	321.00	321.00	214.00	107.00	
33	Komerelli Mallannasagar P.S (Pkg-12) at Thukkapur P.S	43.00	32.00	8	344.00	256.00	400 KV	----	----	64.00	64.00	64.00	128.00	128.00	192.00	192.00	192.00	128.00	64.00	
34	Palamulaparthypumping Station (Pkg-14) Stag-1, Akkaram in Karimnagar District	27.00	22.00	6	162.00	132.00	220KV	----	----	22.00	22.00	44.00	44.00	66.00	88.00	88.00	88.00	66.00	44.00	
35	Paamulaparthypumping Station (Pkg-14) Stage-2, Markook in Karimnagar	34.00	27.00	6	204.00	162.00	220 KV	----	----	27.00	27.00	54.00	54.00	81.00	108.00	108.00	108.00	81.00	54.00	
36	Pumping Station at Sarangapur (Pkg-20) in Nizamabad District	30.00	24.00	3	90.00	72.00	220 KV	----	----	----	----	----	48.00	48.00	48.00	48.00	48.00	----	----	
37	Pumping Station at Manchippa (Pkg-21) in Nizamabad District	31.00	24.80	2	62.00	49.60	220 KV	----	----	----	----	----	----	----	----	----	----	----	----	

Sl. No.	Name of Pumping station	Rating of each Motor in MW	Average recorded load of each pump	No. of pumps	Total connected load of pumping station in MW	Total recorded load of pumping station	Substation Voltages	Load in MW which can come on Telangana State power grid during April 2023 to March 2024											
								April. 2023	May. 2023	June 2023	July. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023	Jan. 2024	Feb. 2024	Mar. 2024
38	a) Pumping station (Pkg-22) Lift-1 with in Karimnagar district	30.00	24.00	3	90.00	72.00	220 KV	----	----	----	----	----	----	----	----	----	----	----	----
	b) Pumping station (Pkg-22) Lift-2 with in Karimnagar	1.95	1.56	1	1.95	1.56	220 KV	----	----	----	----	----	----	----	----	----	----	----	----

Sl. No	Name of Pumping station	Rating of each Motor in MW	Average recorded load of each pump	No. of pumps	Total connected load of pumping station in MW	Total recorded load of pumping station	Substation Voltages	Load in MW which can come on Telangana State power grid during April 2023 to March 2024											
								April. 2023	May. 2023	June 2023	July. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023	Jan. 2024	Feb. 2024	Mar. 2024
40	a) Pumping station (Pkg-28) Lift-1 with in Karimnagar district	7.50	6.00	1	7.50	6.00	132 KV	----	----	----	----	----	6.00	6.00	6.00	6.00	----	----	----
	b) Pumping station (Pkg-28) Lift-2 with in Karimnagar district	5.23	4.18	1	5.23	4.18	132 KV	----	----	----	----	----	4.18	4.18	4.18	4.18	----	----	----
<b>E</b>	<b>SRSP FFC Pumping stations</b>																		
42	Stage-1, pumping station	6.50	5.20	8	52.00	41.60	220 KV	----	----	----	10.40	10.40	10.40	20.80	20.80	20.80	10.40	10.40	----
43	Stage-2, pumping station	6.50	5.20	8	52.00	41.60	220KV	----	----	----	10.40	10.40	10.40	20.80	20.80	20.80	10.40	10.40	----
44	Stage-3, pumping station at	6.50	5.20	8	52.00	41.60	220KV	----	----	----	10.40	10.40	10.40	20.80	20.80	20.80	10.40	10.40	----
<b>F</b>	<b>Sita Rama Lift Irrigation in Khammam district</b>																		
45	Pumping station at Kothurtu Stage-1 P.S	25.00	20.00	6	150.00	120.00	220KV	----	----	----	----	----	----	----	40.00	<b>20.00</b>	----	----	----
46	Pumping station at Koyagutta Sataage -2 P.S	40.00	32.00	6	240.00	192.00	220KV	----	----	----	----	----	----	----	64.00	<b>32.00</b>	----	----	----
47	Pumping station at Sattupalli P.Sstage-3																		
	i) Phase 1	40.00	32.00	5	200.00	160.00	220 KV and 400KV	----	----	----	----	----	----	----	64.00	<b>32.00</b>	----	----	----
	ii) Phase 1	30.00	24.00	2	60.00	48.00		----	----	----	----	----	----	----	48.00	<b>24.00</b>	----	----	----
48	Sattupally trunk P.S																		
	a)For lifting water to EL 275 M	10.50	8.40	3	31.50	25.20	132 KV	----	----	----	----	----	----	----	----	8.40	----	----	----
	b) for lifting water to EL .223 M	6.10	4.88	3	18.30	14.64		----	----	----	----	----	----	----	----	4.88	----	----	----
	<b>Total</b>			<b>261</b>	<b>7257.5</b>	<b>5817.9</b>				<b>543.00</b>	<b>1037.98</b>	<b>1125.46</b>	<b>1465.65</b>	<b>1782.02</b>	<b>2494.82</b>	<b>2897.58</b>	<b>2884.00</b>	<b>1877.96</b>	<b>1043.56</b>
	<b>Simultaneous load which can come on power grid will be 60% of connected load</b>					<b>3490.72</b>				<b>325.80</b>	<b>622.79</b>	<b>675.28</b>	<b>879.39</b>	<b>1069.21</b>	<b>1496.89</b>	<b>1738.55</b>	<b>1730.40</b>	<b>1126.77</b>	<b>626.14</b>

**Expected month wise load details of Pumping Stations under execution on Krishna River**

Sl.N	Name of Pumping Station	Rating of each Motor in MW	Avg. recorded load	No. of pumps	Total connected load of pumping station in MW	total recorded load	Substation Voltages	April. 2023	May. 2023	June. 2023	July. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023	Jan. 2024	Feb. 2024	Mar. 2024
	<b>Palamur ranga Reddy lift irrigation Scheme</b>																		
1	Stage-1 Narlapur Pumping Station at Anjanagiri Reservoir in Wanaparthy District	145.00	116.00	8	1160.00	928.00	400KV	-----	-----	-----	116.00	232.00	232.00	348.00	348.00	348.00	116.00	116.00	-----
2	Stage-2 Yedula Pumping Station at Venkatadri Reservoir in Wanaparthy District	145.00	116.00	9	1305.00	1044.00	400KV	-----	-----	-----	116.00	232.00	232.00	348.00	348.00	348.00	116.00	116.00	-----
3	Stage-3 Vатtem Pumping Station at Vатtem Reservoir in Nagarkurnool District	145.00	116.00	9	1305.00	1044.00	400KV	-----	-----	-----	116.00	232.00	232.00	348.00	348.00	348.00	116.00	116.00	-----
4	Stage - 4 Uddandapur pumping station at Udandapur reservoir in Mahaboobnagar district	145.00	116.00	5	725.00	580.00	400KV	-----	-----	-----	116.00	232.00	232.00	348.00	348.00	348.00	116.00	116.00	-----
5	Stage -5 pumping station at KP Lakshmedivpally in R.R district	95.00	76.00	3	285.00	228.00	220 KV	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
6	Gattu Lift irrigation scheme , near relampad Gadwal Dostrict	12.00	9.60	2	24.00	19.20	132 KV	-----	-----	-----	9.60	19.20	19.20	19.20	19.20	9.60	-----	-----	-----
	<b>Total installed capacity (load)</b>			<b>36</b>	<b>4804.00</b>	<b>3843.20</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>473.60</b>	<b>947.20</b>	<b>947.20</b>	<b>1411.20</b>	<b>1392.00</b>	<b>1401.60</b>	<b>464.00</b>	<b>464.00</b>	<b>0.00</b>
	<b>Simultaneous load load on power grid wil be 60% of installed load</b>				<b>2882.40</b>	<b>2305.92</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>284.16</b>	<b>568.32</b>	<b>568.32</b>	<b>846.72</b>	<b>835.20</b>	<b>840.96</b>	<b>278.40</b>	<b>278.40</b>	<b>0.00</b>





Sl.No	Name of Pumping Station																			
		Rating of each Motor	Avg. rating of each motor	No. of pumps	Total connected load of pumping	Total recorded load	Substation Voltages	April. 2023	May. 2023	June. 2023	July. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023	Jan. 2024	Feb. 2024	Mar. 2024	
	b) to draw water from Mallanna sagar canal at 101.20 KM and pump to Ayacut at EI 542.40 M	2.00	1.60	4	8.00	6.40														
	<b>Total</b>			<b>7</b>																
	<b>Yellandu pumping stations</b>																			
18	<b>a) Pumping station-1</b>																			
	i) To pump water to D.C-1A	0.90	0.72	2	1.80	1.44	132 KV													
	ii) To pump water to D.C-1 - B1	8.00	6.40	2	16.00	12.80														
	iii) To pump water to D.C-1- B2	7.00	5.60	2	14.00	11.20														
	<b>Total</b>			<b>6</b>																
19	<b>a) Pumping station-3</b>																			
	i) To pump water to D.C-3 A	7.50	6.00	2	15.00	12.00	132 KV													
	ii) To pump water to D.C-1 - 3 B	1.65	1.32	2	3.30	2.64														
20	<b>Devadula LIS</b>																			
	i) Phase-III Package-III Devannapet pumping station	31.00	24.80	3	93.00	74.40	220 KV	----	----	----	24.80	24.80	24.80	24.80	24.80	24.80	24.80	24.80	24.80	
	ii) Rajavaram pump house	4.30	3.44	2	8.60	6.88		----	----	----	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	
21	Malakpet Pumping Station (Pkg-09) in combined Karimnagar District																			
	Satge-1 pumping station to pump water from midmaneru to malakpet	30.00	24.00	2	60.00	48.00		----	----	----	----	----	----	----	24.00	24.00	24.00	----	----	
	Satge-2 pumping station to pump water from singa samudrum to	2.25	1.80	2	4.50	3.60		----	----	----	----	----	----	----	1.80	2.00	4.50	----	----	
	<b>Total</b>			<b>4</b>																
	<b>Total of all miscellaneous lift irrigation Schemes under formulation / execution</b>																			
	<b>Total installed capacity (load)</b>			<b>109</b>	<b>3506.20</b>	<b>2804.96</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>519.84</b>	<b>1111.44</b>	<b>1603.04</b>	<b>1819.04</b>	<b>1037.24</b>	<b>545.84</b>	<b>548.34</b>	<b>28.24</b>	<b>28.24</b>	
	<b>Normal load on power grid will be 60% of installed load</b>				<b>2103.72</b>	<b>1682.98</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>311.90</b>	<b>666.86</b>	<b>961.82</b>	<b>1091.42</b>	<b>622.34</b>	<b>327.50</b>	<b>329.00</b>	<b>16.94</b>	<b>16.94</b>	



## Annexure-IV

### SOUTHERN POWER DISTRIBUTION COMPANY OF TS LIMITED

#### DCB Cumulative Report for 2016-17 Financial Year

SL.No.	SCNO	NAME	CIR_NAME	CAT	CMD	VOLTAGE	RDG_STAT	SALES	OB	DEMAND	COLLECTION	CB
1	GDL489	DEPUTY EXECUTIVE ENGINEER	GADWAL	4A	180	11	1	91691	-93946.06	605076	394023	117106.94
2	GDL581	PRESIDENT	GADWAL	4A	405	11	1	478526	145696.51	3071718	2039352	1178062.51
3	GDL614	P.VASA REDDY, PRESIDENT	GADWAL	4A	960	11	1	795188	-26471.7	6195429	2750595	3418362.3
4	GDL620	THE PRESIDENT	GADWAL	4A	120	11	1	435844	-200180.48	3104196	1833878	1070137.52
5	GDL621	THE PRESIDENT	GADWAL	4A	100	11	1	244872	116203.17	1590189	923017	783375.17
6	GDL971	THE EXECUTIVE ENGINEER.	GADWAL	4A	87500	220	1	34561760	75443525.6	231228598	75443526	231228597.6
7	GDL985	THE EXECUTIVE ENGINEER.	GADWAL	4A	68750	220	1	38753834	80618767	261363913	80618769	261363911
8	MBN1086	M/S. KOILSAGAR LIFT IRRIGATION	MAHABOORNAGAR	4A	18750	132	1	16889718	150120581	124681038	221301052	53500567
9	MBN1106	EXECUTIVE ENGINEER.	MAHABOORNAGAR	4A	18750	132	1	24932100	164219500	182924454	338975067	8168887
10	MBN1115	EXECUTIVE ENGINEER	MAHABOORNAGAR	4A	13000	132	2	6926174	1316422	48314634	43660968	5970088
11	MBN324	KALLAHALLI VEERANJANEYA FARMER	MAHABOORNAGAR	4A	300	11	1	346099	-325540.55	2248436	1441579	481316.45
12	MBN325	DEPUTY EXECUTIVE ENGINEER	MAHABOORNAGAR	4A	875	11	2	1240988	-724719.24	12001458	5159138	6117600.76
13	MBN328	DEPUTY EXECUTIVE ENGINEER	MAHABOORNAGAR	4A	750	11	1	572064	-444064.65	3615085	2291425	879595.35
14	MBN395	DEPUTY EXECUTIVE ENGINEER	MAHABOORNAGAR	4A	625	11	1	0	-173467.07	-32455	0	-205922.07
15	MBN432	DEPUTY EXECUTIVE ENGINEER	MAHABOORNAGAR	4A	270	11	1	0	-85708.84	-3914	0	-89622.84
16	MBN437	DEPUTY EXECUTIVE ENGINEER	MAHABOORNAGAR	4A	100	11	1	150458	-118813.19	968679	584476	265389.81
17	MBN487	DEPUTY EXECUTIVE ENGINEER	MAHABOORNAGAR	4A	180	11	1	257653	159739.49	1732932	1515778	376893.49
18	MBN558	KONDADODDI L.I.SCHEME BENEFICI	MAHABOORNAGAR	4A	440	11	1	0	-359728.98	-17579	0	-377307.98
19	MBN624	SRI RAGHAVENDRA LIFT IRRIGATION	MAHABOORNAGAR	4A	510	11	2	737520	-393449.89	4672136	3350067	928619.11
20	MBN633	DY. EXECUTIVE ENGINEER, APSIDC	MAHABOORNAGAR	4A	300	11	1	366000	-183543.51	2348941	1538658	626739.49
21	MBN635	DY. EXECUTIVE ENGINEER, APSIDC.	MAHABOORNAGAR	4A	600	11	1	453484	-770760.61	2916102	1929349	215992.39
22	MBN636	DY. EXECUTIVE ENGINEER, APSIDC.	MAHABOORNAGAR	4A	510	11	1	677720	-447638	4373132	2705828	1219666
23	MBN650	DY. EXECUTIVE ENGINEER, APSIDC	MAHABOORNAGAR	4A	405	11	1	352579	2420.9	2496323	2362306	136437.9
24	MBN660	DY. EXECUTIVE ENGINEER	MAHABOORNAGAR	4A	200	11	1	125256	778768.06	947652	1592959	133461.06
25	MBN886	THE EXECUTIVE ENGINEER	MAHABOORNAGAR	4A	37000	132	2	20955200	-1905889.47	138911521	140439615	-3433983.47
26	MCL2923	EXECUTIVE OFFICER (WW)	MEDCHAL	4A	220	11	1	76098	0	497041	497041	0
27	MDK1586	THE PRESIDENT.	MEDAK	4A	300	11	1	294616	71754	1977068	16616	2032206
28	MDK1879	THE PRESIDENT.	MEDAK	4A	150	11	1	167788	799408	1233559	12725	2020242
29	MDK1880	THE PRESIDENT.	MEDAK	4A	300	11	1	141653	313949	1019356	12743	1320562
30	MDK1971	M/S. THE PRESIDENT	MEDAK	4A	80	11	1	64172	74873	445465	12743	507595
31	MDK2008	TOOPRAN LI SCHEME	MEDAK	4A	120	11	1	20255	87231	151135	90276	148090

32	MDK2019	THE PRESIDENT OF APSIDC LIFT IRRIGATION	MEDAK	4A	80	11	1	78588	18908	536922	12743	543087
33	MDK410	DY EXECUTIVE ENGINEER	MEDAK	4A	120	11	1	35652	447231.39	330611	14737	763105.39
34	MDK546	DY EXECUTIVE ENGINEER	MEDAK	4A	300	11	3	0	20211.97	20468	12725	27954.97
35	MDK557	EXECUTIVE ENGINEER	MEDAK	4A	180	11	3	0	24448.48	22954	12687	34715.48
36	NGK1242	EXECUTIVE ENGINEER MGKLIS, DIVISION 2, NAGARKURNOOL	NAGARKURNOOL	4A	167500	132	1	101224000	0	664332946	249472391	414860555
37	NGK616	SRI RAMA LIFT IRRIGATION	NAGARKURNOOL	4A	600	11	3	0	-46873.41	-30445	0	-77318.41
38	NGK617	SRI RAMA LIFT IRRIGATION	NAGARKURNOOL	4A	85	11	3	0	-888.68	11509	12399	-1778.68
39	NGK623	MADHAVA SWAMY NAGAR LIS,	NAGARKURNOOL	4A	220	11	3	0	-38303.7	69	0	-38234.7
40	NGK918	EXECUTIVE ENGINEER.	NAGARKURNOOL	4A	187500	220	2	137324665	25527133.81	889404964	229720825	685211272.8
41	NLG1082	SHATHINAGAR LIFT IRRIGATION SCHEME	NALGONDA	4A	180	11	1	134446	1147539.02	1169214	203832	2112921.02
42	NLG1083	DAMARCHARLA LIFT IRRIGATION	NALGONDA	4A	150	11	1	276891	2103717	2206771	313656	3996832
43	NLG1110	NADIGADDA LIFT IRRIGATION SCHEME	NALGONDA	4A	161	11	1	211833	1162936	1701782	0	2864718
44	NLG1145	DATHATREYA LIFT IRRIGATION SCHEME	NALGONDA	4A	167	11	1	97396	48844	696476	0	745320
45	NLG1156	GANDHI NAGAR LIFT IRRIGATION SCHEME	NALGONDA	4A	523	11	1	101233	0	682243	0	682243
46	NLG1160	M/s The President L16 LI Scheme	NALGONDA	4A	310	11	1	184664	0	1539125	562164	976961
47	NLG1181	CEO Zillaparishad, Nalgonada	NALGONDA	4A	135	11	1	106615	0	770600	0	770600
48	NLG120	EXECUTIVE ENGINEER/ APSIDC	NALGONDA	4A	235	11	1	0	1663816.43	228858	1822603	70071.43
49	NLG121	RAMALINGESWARA LICS 2	NALGONDA	4A	315	11	1	0	1060020.04	162675	1153622	69073.04
50	NLG122	DY EXECUTIVE ENGINEER	NALGONDA	4A	540	11	1	248115	695720.39	1733595	1541283	888032.39
51	NLG165	ADARSHA COMPREHENSIVE LICS	NALGONDA	4A	774.5	11	1	215386	4650291.66	2137570	6092054	695807.66
52	NLG166	JAIKISAN COMPREHENSIVE LICS	NALGONDA	4A	820	11	1	332076	2111972	2449189	2298678	2262483
53	NLG167	VEMANA COMPREHENSIVE LICS	NALGONDA	4A	273.5	11	1	78198	2544178.51	956329	2727963	772544.51
54	NLG168	JAIKISAN LICS NO.2	NALGONDA	4A	550	11	1	4716	527998.27	96319	563416	60901.27
55	NLG178	DY EXECUTIVE ENGINEER/ APSIDC	NALGONDA	4A	300	11	1	301264	534474.02	2053710	1363789	1224395.02
56	NLG179	EXECUTIVE ENGINEER/ APSIDC	NALGONDA	4A	85	11	1	20856	4116300.38	756910	4589720	283490.38
57	NLG188	EXECUTIVE ENGINEER/ APSIDC	NALGONDA	4A	260	11	1	237261	6944953.58	7333454	12380640	1897767.58
58	NLG189	EXECUTIVE ENGINEER/ APSIDC	NALGONDA	4A	95	11	1	60790	876377.43	551251	1367769	59859.43
59	NLG190	EXECUTIVE ENGINEER/ APSIDC	NALGONDA	4A	270	11	1	241444	1586501.64	1993317	2242726	1337092.64
60	NLG191	TIRUMALASRINIVASA LICS STAGE	NALGONDA	4A	170	11	1	0	2150120.8	308349	2370239	88230.8
61	NLG192	EXECUTIVE ENGINEER/ APSIDC	NALGONDA	4A	210	11	1	104409	12124537.48	2489659	13395028	1219168.48
62	NLG214	EXECUTIVE ENGINEER/ APSIDC	NALGONDA	4A	210	11	1	184104	2383942.49	1592564	3268739	707767.49
63	NLG215	EXECUTIVE ENGINEER/ APSIDC	NALGONDA	4A	150	11	1	1128745	1564518.02	6928931	7582126	911323.02
64	NLG216	EXECUTIVE ENGINEER/ APSIDC	NALGONDA	4A	170	11	1	8944	732632.04	182242	881143	33731.04
65	NLG217	DY EE APSIDC L 1 SCHEME	NALGONDA	4A	245	11	1	37404	109400.68	276086	158048	227438.68
66	NLG218	EE APSIDC MIRYALAGUDA	NALGONDA	4A	185	11	1	0	1169809.18	163604	1282136	51277.18

67	NLG219	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	91	11	1	0	-150478.47	7807	1685	-144356.47
68	NLG236	EXECUTIVEENGINEER/APSIDC	NALGONDA	4A	185	11	1	3504	1170999.63	190300	1309289	52010.63
69	NLG248	EE/APSIDC/NAGARJUNASAGAR	NALGONDA	4A	245	11	1	0	26924.54	22838	43847	5915.54
70	NLG261	EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	9618	17639.71	79619	69667	27591.71
71	NLG270	DY EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	58245	371830.33	443147	429958	385019.33
72	NLG271	DY EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	0	1543959.55	210773	1698014	56718.55
73	NLG285	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	365	11	1	19304	2108295.81	489530	2498089	99736.81
74	NLG286	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	360	11	1	0	-547130.59	10820	1685	-537995.59
75	NLG296	DEPUTY EXECUTIVE ENGINEER	NALGONDA	4A	225	11	1	98488	1464457.08	884684	1935799	413342.08
76	NLG309	EXECUTIVE ENGINEER	NALGONDA	4A	1310	11	1	777670	10094367.69	6499363	12207120	4386610.69
77	NLG313	EXECUTIVE ENGINEER	NALGONDA	4A	115	11	1	0	7294137.99	1041950	8063584	272503.99
78	NLG317	EXECUTIVE ENGINEER	NALGONDA	4A	155	11	99	0	1336776.56	0	0	1336776.56
79	NLG377	THE EXECUTIVE ENGINEER	NALGONDA	4A	160	11	1	0	1004567.8	167299	1116658	55208.8
80	NLG413	THE EXECUTIVE ENGINEER	NALGONDA	4A	100000	220	1	290121867	140637204.2	1886517908	736991601	1290163511
81	NLG432	THE PRESIDENT,BRUNDAVANPUR,	NALGONDA	4A	175	11	1	83312	1243228.89	749861	289191	1703898.89
82	NLG455	THE PRESIDENT, LI SCHEME,	NALGONDA	4A	935	33	1	1144530	1802495.61	7838597	4506483	5134609.61
83	NLG562	THE EXECUTIVE ENGINEER.	NALGONDA	4A	190	11	1	119868	980470.28	937432	196133	1721769.28
84	NLG887	M/S. VIVEKANANDA LIFT IRRIGATI	NALGONDA	4A	450	11	1	529380	-9065766.5	6201999	4466233	-7330000.5
85	NLGT001	THE GENERAL MANAGER ENGG	NALGONDA	4A	1800	33	99	709900	0	10345607	10345607	0
86	SDP2220	LIFT IRRIGATION NANGNOOR	SIDDIPET	4A	110	11	1	29861	0	210746	2977	207769
87	SDP2221	SRI MAHADEVA SWAMY LIFT IRRIGATION	SIDDIPET	4A	110	11	1	34257	0	237399	0	237399
88	SDP2234	EXECUTIVE ENGINEER TDWSP DIVISION GAJWEL	SIDDIPET	4A	750	11	1	1109300	0	7365730	0	7365730
89	SDP2278	EXECUTIVE ENGINEER, I.B DIVISION SIDDIPET 1	SIDDIPET	4A	1000	11	1	11890	0	3376586	0	3376586
90	SDP2279	EXECUTIVE ENGINEER, I.B DIVISION SIDDIPET 2	SIDDIPET	4A	1000	11	1	9300	0	4056885	0	4056885
91	SGR1355	M/S. SRI RAMA MUTUAL AIDED	SANGAREDDY	4A	200	11	1	0	-189744.84	-6326	12743	-208813.84
92	SGR1356	THE PRESIDENT,GANGARAM LI	SANGAREDDY	4A	200	11	1	5898	-198032.97	31782	12743	-178993.97
93	SGR1531	THE EXCECUTIVE ENGINEER (I &	SANGAREDDY	4A	250	11	3	0	3447854	574562	0	4022416
94	SGR1537	THE PRESIDENT. BORANCHA POCHAM	SANGAREDDY	4A	980	11	1	115740	154196	665704	135525	684375
95	SGR1556	THE EXECUTIVE ENGINEER	SANGAREDDY	4A	250	11	3	0	3199019	519671	0	3718690
96	SGR1865	THE EXECUTIVE ENGINEER (I & CA	SANGAREDDY	4A	250	11	3	0	1262416	192097	0	1454513
97	SGR2016	Executive Engineer RWS & S Division Sadasivpet	SANGAREDDY	4A	100	11	1	218	59852	24024	0	83876
98	SGR2100	LIFT IRRIGATION SCHEME SINGOOR PROJECT	SANGAREDDY	4A	1600	33	1	22800	0	171580	0	171580
99	SGR576	CHAIRMAN OF LI SCHEME	SANGAREDDY	4A	340	11	1	0	1379.78	13183	12725	1837.78

100	SGR864	M/S. EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	180	11	1	38045	83274.88	267315	203805	146784.88
101	SGR865	M/S. EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	150	11	1	0	-86905.28	11289	12725	-88341.28
102	SGR866	M/S.EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	210	11	1	0	-104465.93	8787	12781	-108459.93
103	SPT1014	M/S. MAHANKALIGUDEM LI SCHEME	SURYAPET	4A	150	11	1	201941	1967822.36	1601653	665077	2904398.36
104	SPT1030	THE PRESIDENT. APSIDC LI SCHEM	SURYAPET	4A	1700	33	1	2326204	1771049	16467833	11150987	7087895
105	SPT1080	M/S. GANGA BHAVANI LIFT IRRIGATION SCHEME	SURYAPET	4A	106	11	1	107550	1106230	916854	136273	1886811
106	SPT1140	PRESIDENT BENIFICINAR COMITEE APSIDC LI SEHEME	SURYAPET	4A	4800	33	1	3977000	2577	26063562	0	26066139
107	SPT1141	PRESIDENT BENIFICINAR COMITEE APSIDC LI SCHEME	SURYAPET	4A	2000	33	1	1320400	4881	8648079	0	8652960
108	SPT1161	AMARAVARAM L.I.SCHEME	SURYAPET	4A	3600	33	1	3667300	0	28002638	305620	27697018
109	SPT169	ASSISTANT ENGINEER	SURYAPET	4A	460	11	1	737860	2511741.3	5479483	5255724	2735500.3
110	SPT195	MAHATMA GANDHI LICS	SURYAPET	4A	170	11	1	0	-8552.43	11869	1685	1631.57
111	SPT196	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	110	11	1	47262	2502439.81	837096	3197745	141790.81
112	SPT197	THE EXECUTIVE ENGINEER	SURYAPET	4A	185	11	99	0	159443.87	38343	180992	16794.87
113	SPT198	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	456	11	1	427525	1857278.1	3141702	3395343	1603637.1
114	SPT199	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	250.8	11	1	219025	2523254.13	1890319	3548802	864771.13
115	SPT200	ASST ENGR APSIDC	SURYAPET	4A	130	11	1	128103	794499.79	1034787	1047277	782009.79
116	SPT201	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	85	11	1	41613	572431.01	376295	634765	313961.01
117	SPT202	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	450	11	1	121305	2907770.99	1252593	3597559	562804.99
118	SPT203	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	319.2	11	1	13600	5665170.86	998988	6424880	239278.86
119	SPT204	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	381.9	11	1	168320	2302653.54	1471926	2607675	1166904.54
120	SPT205	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	176.7	11	3	0	521469.63	92277	576298	37448.63
121	SPT207	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	1140	11	1	2313378	-22701128.54	17163705	3772652	-9310075.54
122	SPT211	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	760	11	1	511744	2377122.39	3774840	4350625	1801337.39
123	SPT287	DY EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	305	11	1	17239	1360890.27	361741	1639577	83054.27
124	SPT299	DEPUTY EXECUTIVE ENGINEER	SURYAPET	4A	505	11	1	464192	2001322.55	3418433	3579349	1840406.55
125	SPT300	DEPUTY EXECUTIVE ENGINEER	SURYAPET	4A	965	11	1	1171525	2129940.59	8074277	5864314	4339903.59
126	SPT316	EXECUTIVE ENGINEER	SURYAPET	4A	165	11	1	227691	2472996.87	1946541	3687749	731788.87
127	SPT328	DY EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	145	11	1	10558	617050.31	190451	770326	37175.31
128	SPT390	PRESIDENT	SURYAPET	4A	1400	11	1	1135820	583661.17	7453251	25863	8011049.17
129	SPT461	THE PRESIDENT	SURYAPET	4A	85	11	1	113800	852888.23	921964	103565	1671287.23
130	SPT481	THE PRESIDENT	SURYAPET	4A	200	11	3	0	755256.53	123171	21465	856962.53
131	SPT482	THE PRESIDENT	SURYAPET	4A	235	11	3	0	429728.48	64866	10765	483829.48
132	SPT483	THE PRESIDENT	SURYAPET	4A	130	11	3	0	2660366.33	389720	71605	2978481.33
133	SPT642	M/S. RAITHU RAKSHA L.I. SCHEME	SURYAPET	4A	140	11	1	261319	2169943.14	2227816	1454632	2943127.14
134	SPT643	M/S. UTHAM PADMAVATHI LIFT IRR	SURYAPET	4A	1790	11	1	666660	8118638.41	5458762	1538526	12038874.41
135	SPT747	M/S. KODANDA RAMASWAMY LIFT IR	SURYAPET	4A	228	11	1	193924	1778089.36	1530522	819568	2489043.36

136	SPT784	M/S. TADVAI LIFT IRRIGATION SC	SURYAPET	4A	210	11	1	18882	75983.17	141686	13509	204160.17
137	SPT816	M/S. SEETHARAMANJANEYA LI SCHE	SURYAPET	4A	785	11	1	370427	3087674.49	2930414	4370868	1647220.49
138	SPT820	M/S. UTTAM KUMAR REDDY LIFT IR	SURYAPET	4A	2395	33	1	4275210	-5989925.4	30087273	23065344	1032003.6
139	SPT826	THE PRESIDENT BENEFICIARIES CO	SURYAPET	4A	1760	33	1	1187621	2464809.45	15343549	12638772	5169586.45
140	SPT834	M/S. KARSHAKAMITRA LI SCHEME.	SURYAPET	4A	88	11	1	46333	906514.43	404163	80202	1230475.43
141	SPT870	THE PRESIDENT MANCHYA THANDA L	SURYAPET	4A	400	11	1	418872	2242945.94	3140706	405440	4978211.94
142	VKB410	EXECUTIVE ENGINEER PWD	VIKARABAD	4A	155.5	11	3	0	4134.29	6958	18540	-7447.71
143	VKB413	DEPUTY EXECUTIVE ENGINEER	VIKARABAD	4A	120	11	3	0	3859.82	12012	19365	-3493.18
144	WNP1107	EXECUTIVE ENGINEER.	WANAPARTHY	4A	100	11	1	1747	-29303	22129	3354	-10528
145	WNP1238	EXCUTIVE ENGINEER	WANAPARTHY	4A	167500	132	1	104264000	0	683704703	0	683704703
146	WNP488	DEPUTY EXECUTIVE ENGINEER	WANAPARTHY	4A	225	11	3	0	-55354.64	-296	0	-55650.64
147	WNP517	EXECUTIVE ENGINEER	WANAPARTHY	4A	3220	33	3	0	-911428.87	-39063	0	-950491.87
148	WNP548	SRI KURUMURTHYRARAYA LIFT IRRI	WANAPARTHY	4A	1220	11	1	1646622	-888533.76	10654946	9889190	-122777.76
149	WNP549	AMARACHINTHA L.I.SCHEME BENEFI	WANAPARTHY	4A	1620	33	1	2552285	-919469.91	16907787	13939347	2048970.09
150	WNP563	SRI KURUMURTHYRAYA	WANAPARTHY	4A	310	11	1	61412	-143359.61	347547	207101	-2913.61
151	WNP598	THE PRESIDENT GKRR SANGAM	WANAPARTHY	4A	120	11	3	59360	-151160.22	374906	2250	221495.78
152	WNP600	PRESIDENT MAHABUPAL SAMUDRAM,	WANAPARTHY	4A	120	11	3	0	14291.52	13052	28723	-1379.48
153	WNP605	K.HANUMANTH REDDY	WANAPARTHY	4A	1210	33	1	1042020	2268447.61	6935422	8494407	709462.61
154	WNP613	KRISHNA REDDY, PRESIDENT	WANAPARTHY	4A	200	11	1	46608	-8500.97	311897	184522	118874.03
155	WNP665	G.BHASKAR REDDY (PRESIDENT).	WANAPARTHY	4A	208	11	3	0	-12045.13	2184	2823	-12684.13
156	WNP666	G.BHASKAR REDDY (PRESIDENT)	WANAPARTHY	4A	970	33	3	0	549.61	-200785	3900	-204135.39
157	WNP684	R.HANUMAIAH	WANAPARTHY	4A	245	11	3	0	3787.71	-1901	14901	-13014.29
158	WNP744	A.SHIVANARAYA,S/O.BUCHANNA.	WANAPARTHY	4A	1850	33	1	2536340	2758769.08	18909804	14087821	7580752.08
159	WNP752	THE PRESIDENT	WANAPARTHY	4A	2200	33	1	416660	-946310.53	2275226	337553	991362.47
160	WNP753	THE PRESIDENT	WANAPARTHY	4A	3000	33	1	582500	-1562971.38	3182073	412285	1206816.62
161	WNP754	THE PRESIDENT	WANAPARTHY	4A	1800	33	1	336870	-852516.7	1836018	318529	664972.3
162	WNP848	M/S. RAJIV BHIMA LIFT IRRIGATI	WANAPARTHY	4A	37500	132	1	25433760	-976402.85	168221820	104183143	63062274.15
163	WNP849	M/S. RAJIV BHIMA LIFT IRRIGATI	WANAPARTHY	4A	12500	132	1	9603180	40161.38	63564757	52415253	11189665.38
164	WNP885	THE PRESIDENT.	WANAPARTHY	4A	503	11	1	1219350	392985.61	8188428	7005729	1575684.61
165	WNP895	THE PRESIDENT.	WANAPARTHY	4A	840	11	1	989741	202169.93	6498283	5067696	1632756.93
166	YDD686	THE PRESIDENT.	YADADRI	4A	187	11	1	270958	2269822.05	2144360	1126156	3288026.05

# SOUTHERN POWER DISTRIBUTION COMPANY OF TS LIMITED

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### DCB Cumulative Report for 2017-18 Financial Year

1	GDL1294	EXECUTIVE ENGINEER APSIDC ALAMPUR LIFT IRRIGATION	GADWAL	4A	1250	33	1	22400	0	157190	0	157190
2	GDL1295	PRESIDENT KYATHUR LIFT IRRIGATIONS SCHEMEII	GADWAL	4A	2000	33	1	82800	0	546499	0	546499
3	GDL489	DEPUTY EXECUTIVE ENGINEER	GADWAL	4A	180	11	1	63493	117106.94	425282	229714	312674.94
4	GDL581	PRESIDENT	GADWAL	4A	405	11	1	290578	1178062.51	1933186	2059496	1051752.51
5	GDL614	P.VASA REDDY, PRESIDENT	GADWAL	4A	960	11	1	695788	3418362.3	5500785	3655862	5263285.3
6	GDL620	THE PRESIDENT	GADWAL	4A	120	11	1	219812	1070137.52	1701723	1713086	1058774.52
7	GDL621	THE PRESIDENT	GADWAL	4A	100	11	1	126636	783375.17	895011	880105	798281.17
8	GDL971	THE EXECUTIVE ENGINEER.	GADWAL	4A	87500	220	1	33244600	231228597.6	257916921	0	489145518.6
9	GDL985	THE EXECUTIVE ENGINEER.	GADWAL	4A	68750	220	4	38035974	261363911	296533288	0	557897199
10	MBN1086	M/S. KOILSAGAR LIFT IRRIGATION	MAHABOOBNAGAR	4A	18750	132	1	11842248	53500567	86992124	49678404	90814287
11	MBN1106	EXECUTIVE ENGINEER.	MAHABOOBNAGAR	4A	18750	132	1	18795912	8168887	137412998	2346731	143235154
12	MBN1115	EXECUTIVE ENGINEER	MAHABOOBNAGAR	4A	13000	132	22	7171860	5970088	51287687	1205715	56052060
13	MBN1307	DEPUTY EXECUTIVE ENGINEER RWS & S	MAHABOOBNAGAR	4A	120	11	0	58077	0	444299	0	444299
14	MBN324	KALLAHALLI VEERANJANEYA FARMER	MAHABOOBNAGAR	4A	300	11	1	288961	481316.45	1946285	1214459	1213142.45
15	MBN325	DEPUTY EXECUTIVE ENGINEER	MAHABOOBNAGAR	4A	875	11	1	1848954	6117600.76	13347968	3829105	15636463.76
16	MBN328	DEPUTY EXECUTIVE ENGINEER	MAHABOOBNAGAR	4A	750	11	1	548208	879595.35	3617755	1879279	2618071.35
17	MBN395	DEPUTY EXECUTIVE ENGINEER	MAHABOOBNAGAR	4A	625	11	1	0	-205922.07	-22815	0	-228737.07
18	MBN432	DEPUTY EXECUTIVE ENGINEER	MAHABOOBNAGAR	4A	270	11	1	0	-89622.84	1629	0	-87993.84
19	MBN437	DEPUTY EXECUTIVE ENGINEER	MAHABOOBNAGAR	4A	100	11	1	146580	265389.81	989313	516104	738598.81
20	MBN487	DEPUTY EXECUTIVE ENGINEER	MAHABOOBNAGAR	4A	180	11	1	186350	376893.49	1306117	376893	1306117.49
21	MBN558	KONDADODDI L.I.SCHEME BENEFICI	MAHABOOBNAGAR	4A	440	11	1	0	-377307.98	-10075	0	-387382.98
22	MBN624	SRI RAGHAVENDRA LIFT IRRIGATIO	MAHABOOBNAGAR	4A	510	11	1	797302	928619.11	5274920	2139812	4063727.11
23	MBN633	DY. EXECUTIVE ENGINEER,APSIDC	MAHABOOBNAGAR	4A	300	11	1	414988	626739.49	2765842	1153714	2238867.49
24	MBN635	DY. EXECUTIVE ENGINEER,APSIDC.	MAHABOOBNAGAR	4A	600	11	1	487397	215992.39	3185359	1429829	1971522.39
25	MBN636	DY.EXECUTIVE ENGINEER,APSIDC.	MAHABOOBNAGAR	4A	510	11	1	710928	1219666	4725214	2190234	3754646
26	MBN650	DY.EXECUTIVE ENGINEER, APSIDC	MAHABOOBNAGAR	4A	405	11	1	471235	136437.9	3155828	854855	2437410.9
27	MBN660	DY.EXECUTIVE ENGINEER	MAHABOOBNAGAR	4A	200	11	2	193382	133461.06	1337751	287762	1183450.06
28	MBN886	THE EXECUTIVE ENGINEER	MAHABOOBNAGAR	4A	37000	132	22	20970840	-3433983.47	141022863	0	137588879.5
29	MCL2923	EXECUTIVE OFFICER (WW)	MEDCHAL	4A	220	11	1	366732	0	2747523	2747523	0

30	MDK1586	THE PRESIDENT.	MEDAK	4A	300	11	1	478804	2032206	3419365	457627	4993944
31	MDK1879	THE PRESIDENT.	MEDAK	4A	150	11	1	372404	2020242	2882311	310895	4591658
32	MDK1880	THE PRESIDENT.	MEDAK	4A	300	11	1	543012	1320562	3836193	157089	4999666
33	MDK1971	M/S.THE PRESIDENT	MEDAK	4A	80	11	1	187897	507595	1375844	50951	1832488
34	MDK2008	TOOPRAN LI SCHEME	MEDAK	4A	120	11	1	18859	148090	159637	104362	203365
35	MDK2019	THE PRESIDENT OF APSIDC LIFT IRRIGATION	MEDAK	4A	80	11	1	183562	543087	1370100	106133	1807054
36	MDK410	DY EXECUTIVE ENGINEER	MEDAK	4A	120	11	1	150322	763105.39	1175090	191540	1746655.39
37	MDK546	DY.EXECUTIVE ENGINEER	MEDAK	4A	300	11	3	0	27954.97	23474	8425	43003.97
38	MDK557	EXECUTIVE ENGINEER	MEDAK	4A	180	11	3	0	34715.48	177554	160597	51672.48
39	NGK1242	EXECUTIVE ENGINEER MGKLIS, DIVISION 2, NAGARKURNOOL	NAGARKURNOOL	4A	167500	132	1	183624000	414860555	1455320759	240200000	1629981314
40	NGK1287	EXECUTIVE ENGINEER TDWSP (RWS&S) WATER GRID PROJECT	NAGARKURNOOL	4A	360	11	0	11056	0	74960	0	74960
41	NGK616	SRI RAMA LIFT IRRIGATION	NAGARKURNOOL	4A	600	11	3	0	-77318.41	-21094	0	-98412.41
42	NGK617	SRI RAMA LIFT IRRIGATION	NAGARKURNOOL	4A	85	11	3	0	-1778.68	15467	6740	6948.32
43	NGK623	MADHAVA SWAMY NAGAR LIS,	NAGARKURNOOL	4A	220	11	3	0	-38234.7	5072	0	-33162.7
44	NGK918	EXECUTIVE ENGINEER.	NAGARKURNOOL	4A	187500	220	22	219338330	685211272.8	1523154579	369847739	1838518113
45	NLG1082	SHATHINAGAR LIFT IRRIGATION SCHEME	NALGONDA	4A	180	11	1	323124	2112921.02	2778257	2710730	2180448.02
46	NLG1083	DAMARCHARLA LIFT IRRIGATION	NALGONDA	4A	150	11	1	532334	3996832	4236630	5497317	2736145
47	NLG1110	NADIGADDA LIFT IRRIGATION SCHEME	NALGONDA	4A	161	11	1	416287	2864718	3268455	3089795	3043378
48	NLG1145	DATHATREYA LIFT IRRIGATION SCHEME	NALGONDA	4A	167	11	1	234826	745320	1853648	1114677	1484291
49	NLG1156	GANDHI NAGAR LIFT IRRIGATION SCHEME	NALGONDA	4A	523	11	1	303181	682243	2080949	987179	1776013
50	NLG1160	M/s The President L16 LI Scheme	NALGONDA	4A	310	11	1	220345	976961	1614085	565967	2025079
51	NLG1181	CEO Zillaparishad, Nalgonda	NALGONDA	4A	135	11	1	123761	770600	1036683	0	1807283
52	NLG1198	THE EXECUTIVE ENGINEER AMRSLBC PROJECT	NALGONDA	4A	15000	132	1	8364000	0	56637405	0	56637405
53	NLG120	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	235	11	1	0	70071.43	41628	438601	-326901.57
54	NLG121	RAMALINGESWARA LICs 2	NALGONDA	4A	315	11	1	0	69073.04	28879	158608	-60655.96
55	NLG122	DY.EXECUTIVE ENGINEER	NALGONDA	4A	540	11	1	472911	888032.39	3284416	1130001	3042447.39
56	NLG1229	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	0	18196	0	123893	0	123893
57	NLG1230	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	0	53659	0	352984	0	352984
58	NLG1231	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	300	11	0	3755	0	30604	0	30604
59	NLG1232	APSIDCLI SCHEME	NALGONDA	4A	150	11	0	39832	0	263606	0	263606
60	NLG1233	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	0	3226	0	27187	0	27187



61	NLG1234	Exe.Engineer/APSIDC SRI AALETAMMA LIFT IRRIGATION SCHEME	NALGONDA	4A	250	11	0	0	0	8594	0	8594
62	NLG165	ADARSHA COMPREHENSIVE LICS	NALGONDA	4A	774.5	11	1	365324	695807.66	2590596	928534	2357869.66
63	NLG166	JAIKISAN COMPRAHENSIVE LICS	NALGONDA	4A	820	11	1	762156	2262483	5315290	2620609	4957164
64	NLG167	VEMANA COMPRAHENSIVE LICS	NALGONDA	4A	273.5	11	1	391356	772544.51	3053117	1244131	2581530.51
65	NLG168	JAIKISAN LICS NO.2	NALGONDA	4A	550	11	99	0	60901.27	-6718	297234	-243050.73
66	NLG178	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	300	11	1	349000	1224395.02	2473249	1385426	2312218.02
67	NLG179	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	85	11	1	57688	283490.38	482427	570569	195348.38
68	NLG188	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	260	11	1	602427	1897767.58	5004923	2485032	4417658.58
69	NLG189	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	95	11	99	0	59859.43	18753	179232	-100619.57
70	NLG190	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	270	11	1	582460	1337092.64	4580268	1843537	4073823.64
71	NLG191	TIRUMALASRINIVASA LICS STAGE	NALGONDA	4A	170	11	99	0	88230.8	27799	254045	-138015.2
72	NLG192	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	210	11	1	313031	1219168.48	2556985	1730815	2045338.48
73	NLG214	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	210	11	1	229082	707767.49	1680063	1570196	817634.49
74	NLG215	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	150	11	1	295323	911323.02	2965354	1089971	2786706.02
75	NLG216	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	170	11	4	250098	33731.04	1867775	180366	1721140.04
76	NLG217	DY EE APSIDC L 1 SCHEME	NALGONDA	4A	245	11	1	175028	227438.68	1225134	220339	1232233.68
77	NLG218	EEAPSIDCMIRYALAGUDA	NALGONDA	4A	185	11	99	0	51277.18	14878	242309	-176153.82
78	NLG219	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	91	11	99	0	-144356.47	-5167	246547	-396070.47
79	NLG236	EXECUTIVEENGINEER/APSIDC	NALGONDA	4A	185	11	1	47974	52010.63	349903	225067	176846.63
80	NLG248	EE/APSIDC/NAGARJUNASAGAR	NALGONDA	4A	245	11	99	0	5915.54	2404	31247	-22927.46
81	NLG261	EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	34978	27591.71	247577	82535	192633.71
82	NLG270	DY EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	264829	385019.33	1808466	546827	1646658.33
83	NLG271	DY EXECUTIVE ENGINEER	NALGONDA	4A	230	11	99	0	56718.55	16708	435384	-361957.45
84	NLG285	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	365	11	1	81306	99736.81	589748	253470	436014.81
85	NLG286	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	360	11	99	0	-537995.59	-2587	158023	-698605.59
86	NLG296	DEPUTY EXECUTIVE ENGINEER	NALGONDA	4A	225	11	1	212136	413342.08	2112466	595858	1929950.08
87	NLG309	EXECUTIVE ENGINEER	NALGONDA	4A	1310	11	1	960136	4386610.69	6743897	5975616	5154891.69
88	NLG313	EXECUTIVE ENGINEER	NALGONDA	4A	115	11	99	0	272503.99	99977	713160	-340679.01
89	NLG317	EXECUTIVE ENGINEER	NALGONDA	4A	155	11	99	0	1336776.56	0	4500	1332276.56
90	NLG377	THE EXECUTIVE ENGINEER	NALGONDA	4A	160	11	99	0	55208.8	13100	103791	-35482.2
91	NLG413	THE EXECUTIVE ENGINEER	NALGONDA	4A	100000	220	1	283732066	1290163511	2174921278	515016061	2950068728
92	NLG432	THE PRESIDENT, BRUNDAVANPUR,	NALGONDA	4A	175	11	1	166040	1703898.89	1357596	1791827	1269667.89
93	NLG455	THE PRESIDENT, LI SCHEME,	NALGONDA	4A	935	33	1	260800	5134609.61	5490590	10031037	594162.61
94	NLG562	THE EXECUTIVE ENGINEER.	NALGONDA	4A	190	11	1	136610	1721769.28	1151179	2095692	777256.28
95	NLG887	M/S. VIVEKANANDA LIFT IRRIGATI	NALGONDA	4A	450	11	1	437916	-7330000.5	13390646	3249814	2810831.5
96	NLGT001	THE GENERAL MANAGER ENGG	NALGONDA	4A	1800	33	99	6051500	0	73462467	73462377	90

97	SDP2220	LIFT IRRIGATION NANGNOOR	SIDDIPET	4A	110	11	1	39578	207769	310614	79511	438872
98	SDP2221	SRI MAHADEVA SWAMY LIFT IRRIGATION	SIDDIPET	4A	110	11	1	47457	237399	358068	235433	360034
99	SDP2234	EXECUTIVE ENGINEER TDWSP DIVISION GAJWEL	SIDDIPET	4A	750	11	1	2394200	7365730	17818769	0	25184499
100	SDP2278	EXECUTIVE ENGINEER, I.B DIVISION SIDDIPET 1	SIDDIPET	4A	1000	11	1	15400	3376586	716467	0	4093053
101	SDP2279	EXECUTIVE ENGINEER, I.B DIVISION SIDDIPET 2	SIDDIPET	4A	1000	11	1	16980	4056885	848601	0	4905486
102	SGR1355	M/S. SRI RAMA MUTUAL AIDED	SANGAREDDY	4A	200	11	1	60380	-208813.84	400164	8425	182925.16
103	SGR1356	THE PRESIDENT,GANGARAM LI	SANGAREDDY	4A	200	11	3	93	-178993.97	174	11338	-190157.97
104	SGR1531	THE EXCECUTIVE ENGINEER (I &	SANGAREDDY	4A	250	11	3	0	4022416	565161	0	4587577
105	SGR1537	THE PRESIDENT. BORANCHA POCHAM	SANGAREDDY	4A	980	11	1	187560	684375	1338027	47702	1974700
106	SGR1556	THE EXECUTIVE ENGINEER	SANGAREDDY	4A	250	11	3	0	3718690	517737	0	4236427
107	SGR1865	THE EXECUTIVE ENGINEER (I & CA	SANGAREDDY	4A	250	11	3	0	1454513	196890	0	1651403
108	SGR2016	Executive Engineer RWS & S Division Sadasivpet	SANGAREDDY	4A	100	11	1	22496	83876	179406	0	263282
109	SGR2100	LIFT IRRIGATION SCHEME SINGOOR PROJECT	SANGAREDDY	4A	1600	33	1	636600	171580	4547259	0	4718839
110	SGR2306	PRESIDENT PI BOGULLAMPALLY LI MUTUAL AIDED CO-OP SOCIETY	SANGAREDDY	4A	750	11	1	234787	0	1705309	0	1705309
111	SGR2310	Director Phase 2 Bogulampally LiFT IRRIGATION	SANGAREDDY	4A	250	11	1	44053	0	323156	0	323156
112	SGR576	CHAIRMAN OF LI SCHEME	SANGAREDDY	4A	340	11	1	0	1837.78	16290	8425	9702.78
113	SGR864	M/S. EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	180	11	1	16363	146784.88	152095	34239	264640.88
114	SGR865	M/S. EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	150	11	3	0	-88341.28	14665	8425	-82101.28
115	SGR866	M/S.EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	210	11	3	0	-108459.93	12474	8425	-104410.93
116	SPT1014	M/S. MAHANKALIGUDEM LI SCHEME	SURYAPET	4A	150	11	1	98988	2904398.36	1074078	3510118	468358.36
117	SPT1030	THE PRESIDENT. APSIDC LI SCHEM	SURYAPET	4A	1700	33	1	2764900	7087895	26126951	56695503	-23480657
118	SPT1080	M/S. GANGA BHAVANI LIFT IRRIGATION SCHEME	SURYAPET	4A	106	11	1	215994	1886811	1719990	2507851	1098950
119	SPT1140	PRESIDENT BENIFICINARY COMITEE APSIDC LI SEHEME	SURYAPET	4A	4800	33	1	4349000	26066139	31394981	32913137	24547983
120	SPT1141	PRESIDENT BENIFICINARY COMITEE APSIDC LI SCHEME	SURYAPET	4A	2000	33	1	1741200	8652960	12271893	10734991	10189862
121	SPT1161	AMARAVARAM L.I.SCHEME	SURYAPET	4A	3600	33	1	6282900	27697018	46123352	44447574	29372796
122	SPT1226	DEPUTY ENGINEER (APSIDC)	SURYAPET	4A	100	11	0	51623	0	338765	0	338765

123	SPT1227	APSIDCL (34 lift)	SURYAPET	4A	95	11	0	119611	0	892962	0	892962
124	SPT169	ASSISTANT ENGINEER	SURYAPET	4A	460	11	1	1095800	2735500.3	8489049	3175185	8049364.3
125	SPT195	MAHATMA GANDHI LICS	SURYAPET	4A	170	11	1	0	1631.57	20614	14195	8050.57
126	SPT196	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	110	11	1	435	141790.81	92272	949317	-715254.19
127	SPT197	THE EXECUTIVE ENGINEER	SURYAPET	4A	185	11	99	0	16794.87	0	161221	-144426.13
128	SPT198	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	456	11	1	424900	1603637.1	3097095	1760528	2940204.1
129	SPT199	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	250.8	11	1	310090	864771.13	2244022	1650029	1458764.13
130	SPT200	ASST ENGR APSIDC	SURYAPET	4A	130	11	1	153306	782009.79	1233150	868960	1146199.79
131	SPT201	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	85	11	1	66774	313961.01	493127	320812	486276.01
132	SPT202	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	450	11	1	635858	562804.99	4845929	1368165	4040568.99
133	SPT203	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	319.2	11	99	0	239278.86	69692	550481	-241510.14
134	SPT204	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	381.9	11	1	510710	1166904.54	3532297	1364562	3334639.54
135	SPT205	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	176.7	11	99	0	37448.63	7627	95110	-50034.37
136	SPT207	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	1140	11	1	2575224	-9310075.54	52252275	10939618	32002581.46
137	SPT211	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	760	11	1	659032	1801337.39	4738623	2026698	4513262.39
138	SPT287	DY EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	305	11	1	471482	83054.27	3540226	317038	3306242.27
139	SPT299	DEPUTY EXECUTIVE ENGINEER	SURYAPET	4A	505	11	1	444532	1840406.55	3187330	2054691	2973045.55
140	SPT300	DEPUTY EXECUTIVE ENGINEER	SURYAPET	4A	965	11	1	1363725	4339903.59	9724220	4803086	9261037.59
141	SPT316	EXECUTIVE ENGINEER	SURYAPET	4A	165	11	99	0	731788.87	52358	794862	-10715.13
142	SPT328	DY EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	145	11	99	0	37175.31	11052	126645	-78417.69
143	SPT390	PRESIDENT	SURYAPET	4A	1400	11	1	465620	8011049.17	4549819	3586271	8974597.17
144	SPT461	THE PRESIDENT	SURYAPET	4A	85	11	1	184633	1671287.23	1570544	2274024	967807.23
145	SPT481	THE PRESIDENT	SURYAPET	4A	200	11	1	0	856962.53	114704	865402	106264.53
146	SPT482	THE PRESIDENT	SURYAPET	4A	235	11	1	0	483829.48	65601	679571	-130140.52
147	SPT483	THE PRESIDENT	SURYAPET	4A	130	11	1	0	2978481.33	340581	4490189	-1171126.67
148	SPT642	M/S. RAI THU RAKSHA L.I. SCHEME	SURYAPET	4A	140	11	1	210689	2943127.14	1935697	2541301	2337523.14
149	SPT643	M/S. UTHAM PADMAVATHI LIFT IRR	SURYAPET	4A	1790	11	1	713210	12038874.41	6129643	13543724	4624793.41
150	SPT747	M/S. KODANDA RAMASWAMY LIFT IR	SURYAPET	4A	228	11	1	228740	2489043.36	1887348	2990358	1386033.36
151	SPT784	M/S. TADVAI LIFT IRRIGATION SC	SURYAPET	4A	210	11	1	104718	204160.17	744418	612861	335717.17
152	SPT816	M/S. SEETHARAMANJANEYA LI SCHE	SURYAPET	4A	785	11	1	752264	1647220.49	5160263	1853013	4954470.49
153	SPT820	M/S. UTTAM KUMAR REDDY LIFT IR	SURYAPET	4A	2395	33	1	4555950	1032003.6	177555447	160566229	18021221.6
154	SPT826	THE PRESIDENT BENEFICIARIES CO	SURYAPET	4A	1760	33	1	472800	5169586.45	24440907	27418549	2191944.45
155	SPT834	M/S. KARSHAKAMITRA LI SCHEME.	SURYAPET	4A	88	11	1	97196	1230475.43	770167	1395991	604651.43
156	SPT870	THE PRESIDENT MANCHYA THANDA L	SURYAPET	4A	400	11	1	835112	4978211.94	6327890	9647729	1658372.94
157	VKB410	EXECUTIVE ENGINEER PWD	VIKARABAD	4A	155.5	11	3	0	-7447.71	9513	6740	-4674.71
158	VKB413	DEPUTY EXECUTIVE ENGINEER	VIKARABAD	4A	120	11	3	0	-3493.18	11957	6740	1723.82
159	WNP1107	EXECUTIVE ENGINEER.	WANAPARTHY	4A	100	11	3	5	-10528	13391	0	2863

160	WNP1238	EXCUTIVE ENGINEER	WANAPARTHY	4A	167500	132	22	216196000	683704703	1711948336	167500000	2228153039
161	WNP1285	CHIEF EXCUTIVE OFFICER	WANAPARTHY	4A	850	11	1	164700	0	1103104	0	1103104
162	WNP1286	CHIEF EXCUTIVE OFFICER	WANAPARTHY	4A	447	11	1	91333	0	619933	0	619933
163	WNP488	DEPUTY EXECUTIVE ENGINEER	WANAPARTHY	4A	225	11	3	0	-55650.64	4727	0	-50923.64
164	WNP517	EXECUTIVE ENGINEER	WANAPARTHY	4A	3220	33	3	0	-950491.87	-28475	0	-978966.87
165	WNP548	SRI KURUMURTHYRARAYA LIFT IRRI	WANAPARTHY	4A	1220	11	1	1296915	-122777.76	8754824	1139594	7492452.24
166	WNP549	AMARACHINTHA L.I.SCHEME BENEFI	WANAPARTHY	4A	1620	33	1	2459500	2048970.09	16358290	4132773	14274487.09
166	WNP563	SRI KURUMURTHYRAYA	WANAPARTHY	4A	310	11	1	404398	-2913.61	2670018	201219	2465885.39
166	<b>WNP666</b>	<b>G.BHASKAR REDDY (PRESIDENT)</b>	<b>WANAPARTHY</b>	<b>4A</b>	<b>970</b>	<b>33</b>	<b>3</b>	<b>0</b>	<b>-204135.39</b>	<b>-168853</b>	<b>0</b>	<b>-372988.39</b>
166	WNP684	R.HANUMAIAH	WANAPARTHY	4A	245	11	3	0	-13014.29	1500	6740	-18254.29
166	WNP744	A.SHIVANARAYA,S/O.BUCHANNA.	WANAPARTHY	4A	1850	33	1	2936770	7580752.08	20129214	9581194	18128772.08
166	WNP752	THE PRESIDENT	WANAPARTHY	4A	2200	33	1	73150	991362.47	141165	1026188	106339.47
166	WNP753	THE PRESIDENT	WANAPARTHY	4A	3000	33	1	177720	1206816.62	722418	1227670	701564.62
166	WNP754	THE PRESIDENT	WANAPARTHY	4A	1800	33	1	205920	664972.3	1063306	689018	1039260.3
166	WNP848	M/S. RAJIV BHIMA LIFT IRRIGATI	WANAPARTHY	4A	37500	132	1	19878700	63062274.15	144831103	0	207893377.2
166	WNP849	M/S. RAJIV BHIMA LIFT IRRIGATI	WANAPARTHY	4A	12500	132	1	8222090	11189665.38	57933649	0	69123314.38
166	WNP885	THE PRESIDENT.	WANAPARTHY	4A	503	11	1	526548	1575684.61	3547615	1799197	3324102.61
166	WNP895	THE PRESIDENT.	WANAPARTHY	4A	840	11	1	970267	1632756.93	6357228	1895312	6094672.93
166	YDD686	THE PRESIDENT.	YADADRI	4A	187	11	1	247485	3288026.05	2143937	430863	5001100.05

**SOUTHERN POWER DISTRIBUTION COMPANY OF TS LIMITED**

**DCB Cumulative Report for 2018-19 Financial Year**

SL.No.	SCNO	NAME	CIR_NAME	CAT	CMD	VOLTAGE	RDG_STAT	SALES	OB	DEMAND	COLLECTION	CB
1	GDL1294	EXECUTIVE ENGINEER APSIDC ALAMPUR LIFT IRRIGATION	GADWAL	4A	1250	33	1	149200	157190	2386007	211187	2332010
2	GDL1295	PRESIDENT KYATHUR LIFT IRRIGATIONS SCHEMEII	GADWAL	4A	2000	33	1	1516400	546499	11214742	673130	11088111
3	GDL1300	EXECUTIVE ENGINEER RDS DIVISION JOGULAMBA GADWAL	GADWAL	4A	23157.8	132	1	2166300	0	15379780	0	15379780
4	GDL489	DEPUTY EXECUTIVE ENGINEER	GADWAL	4A	180	11	1	92552	312674.94	799879	11008	1101545.94
5	GDL581	PRESIDENT	GADWAL	4A	405	11	1	560292	1051752.51	4125625	0	5177377.51
6	GDL614	P.VASA REDDY, PRESIDENT	GADWAL	4A	960	11	1	672160	5263285.3	16965332	118864	22109753.3
7	GDL620	THE PRESIDENT	GADWAL	4A	120	11	1	377848	1058774.52	3160769	0	4219543.52
8	GDL621	THE PRESIDENT	GADWAL	4A	100	11	1	208884	798281.17	1603262	796897	1604646.17
9	GDL971	THE EXECUTIVE ENGINEER.	GADWAL	4A	87500	220	1	37294120	489145518.6	384135740	0	873281258.6
10	GDL985	THE EXECUTIVE ENGINEER.	GADWAL	4A	68750	220	1	41921779	557897199	408499014	0	966396213
11	MBN1086	M/S. KOILSAGAR LIFT IRRIGATION	MAHABOBNAGAR	4A	18750	132	1	20471000	90814287	162093461	0	252907748
12	MBN1106	EXECUTIVE ENGINEER.	MAHABOBNAGAR	4A	18750	132	1	28894500	143235154	222917682	0	366152836
13	MBN1115	EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	13000	132	22	8233660	56052060	74389292	0	130441352
14	MBN324	KALLAHALLI VEERANJANEYA FARMER	MAHABOBNAGAR	4A	300	11	1	289135	1213142.45	2247915	1504444	1956613.45
15	MBN325	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	875	11	1	1925856	15636463.76	15878141	2955364	28559240.76
16	MBN328	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	750	11	1	159808	2618071.35	2063698	1369022	3312747.35
17	MBN395	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	625	11	1	0	-228737.07	525773	0	297035.93
18	MBN432	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	270	11	1	0	-87993.84	236615	0	148621.16
19	MBN437	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	100	11	1	59686	738598.81	611652	482197	868053.81
20	MBN487	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	180	11	1	234348	1306117.49	1893434	636319	2563232.49
21	MBN558	KONDADODDI L.I.SCHEME BENEFICI	MAHABOBNAGAR	4A	440	11	1	0	-387382.98	364878	0	-22504.98
22	MBN624	SRI RAGHAVENDRA LIFT IRRIGATIO	MAHABOBNAGAR	4A	510	11	1	818592	4063727.11	6542112	2241602	8364237.11
23	MBN633	DY. EXECUTIVE ENGINEER,APSIDC	MAHABOBNAGAR	4A	300	11	1	372512	2238867.49	3112616	1188153	4163330.49
24	MBN635	DY. EXECUTIVE ENGINEER,APSIDC.	MAHABOBNAGAR	4A	600	11	1	716294	1971522.39	5378025	1429731	5919816.39
25	MBN636	DY.EXECUTIVE ENGINEER,APSIDC.	MAHABOBNAGAR	4A	510	11	1	546480	3754646	4567044	2167433	6154257
26	MBN650	DY.EXECUTIVE ENGINEER, APSIDC	MAHABOBNAGAR	4A	405	11	1	533907	2437410.9	4198840	1868656	4767594.9
27	MBN660	DY.EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	200	11	1	95944	1183450.06	1012739	664075	1532114.06
28	MBN886	THE EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	37000	132	22	22090000	137588879.5	192850459	0	330439338.5
29	MCL2923	EXECUTIVE OFFICER (WW)	MEDCHAL	4A	220	11	1	414139	0	2795683	2273788	521895

30	MDK1586	THE PRESIDENT.	MEDAK	4A	300	11	1	301272	4993944	3104527	0	8098471
31	MDK1879	THE PRESIDENT.	MEDAK	4A	150	11	1	195412	4591658	2302240.02	0	6893898.02
32	MDK1880	THE PRESIDENT.	MEDAK	4A	300	11	1	102330	4999666	1781764	0	6781430
33	MDK1971	M/S.THE PRESIDENT	MEDAK	4A	80	11	1	172539	1832488	1685048	0	3517536
34	MDK2008	TOOPRAN LI SCHEME	MEDAK	4A	120	11	1	1842	203365	163503	0	366868
35	MDK2019	THE PRESIDENT OF APSIDC LIFT IRRIGATION	MEDAK	4A	80	11	1	91022	1807054	1052246.01	0	2859300.01
36	MDK2546	EXECUTIVE ENGINEER	MEDAK	4A	140	11	1	443901	0	2797624	0	2797624
37	MDK410	DY EXECUTIVE ENGINEER	MEDAK	4A	120	11	1	80350	1746655.39	1005610	0	2752265.39
38	MDK546	DY.EXECUTIVE ENGINEER	MEDAK	4A	300	11	3	0	43003.97	303682	0	346685.97
39	MDK557	EXECUTIVE ENGINEER	MEDAK	4A	180	11	3	0	51672.48	197645	0	249317.48
40	NGK1242	EXECUTIVE ENGINEER MGKLIS, DIVISION 2, NAGARKURNOOL	NAGARKURNOOL	4A	167500	220	1	278324000	1629981314	2184158529	295517283	3518622560
41	NGK1298	SRI RAMA TERTHESWARA LIFT IRRIGATION	NAGARKURNOOL	4A	250	11	1	18751	0	132294	0	132294
42	NGK616	SRI RAMA LIFT IRRIGATION	NAGARKURNOOL	4A	600	11	3	0	-98412.41	514404	0	415991.59
43	NGK617	SRI RAMA LIFT IRRIGATION	NAGARKURNOOL	4A	85	11	3	0	6948.32	96368	11547	91769.32
44	NGK623	MADHAVA SWAMY NAGAR LIS,	NAGARKURNOOL	4A	220	11	3	0	-33162.7	202681	1702	167816.3
45	NGK918	EXECUTIVE ENGINEER.	NAGARKURNOOL	4A	187500	220	22	339433325	1838518113	2602758926	204260324	4237016715
46	NLG1082	SHATHINAGAR LIFT IRRIGATION SCHEME	NALGONDA	4A	180	11	1	485727	2180448.02	4204436	0	6384884.02
47	NLG1083	DAMARCHARLA LIFT IRRIGATION	NALGONDA	4A	150	11	1	573288	2736145	4690825	0	7426970
48	NLG1110	NADIGADDA LIFT IRRIGATION SCHEME	NALGONDA	4A	161	11	1	376906	3043378	2919550	1351830	4611098
49	NLG1145	DATHATREYA LIFT IRRIGATION SCHEME	NALGONDA	4A	167	11	1	432338	1484291	3773354	805729	4451916
50	NLG1156	GANDHI NAGAR LIFT IRRIGATION SCHEME	NALGONDA	4A	523	11	1	695499	1776013	5090875	1265581	5601307
51	NLG1160	M/s The President L16 LI Scheme	NALGONDA	4A	310	11	1	253034	2025079	2310183	0	4335262
52	NLG1181	CEO Zillaparishad, Nalgonda	NALGONDA	4A	135	11	1	61118	1807283	901753.01	0	2709036.01
53	NLG1198	THE EXECUTIVE ENGINEER AMRSLBC PROJECT	NALGONDA	4A	15000	132	1	8457000	56637405	77188788.01	0	133826193
54	NLG120	EXECUTIVE ENGINEER/ APSIDC	NALGONDA	4A	235	11	1	0	-326901.57	213883	0	-113018.57
55	NLG121	RAMALINGESWARA LICS 2	NALGONDA	4A	315	11	1	513698	-60655.96	3447974	0	3387318.04
56	NLG122	DY.EXECUTIVE ENGINEER	NALGONDA	4A	540	11	1	838707	3042447.39	6531939	0	9574386.39
57	NLG1229	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	74756	123893	659335	0	783228
58	NLG1230	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	111586	352984	962511.01	0	1315495.01
59	NLG1231	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	300	11	1	46455	30604	575911	0	606515
60	NLG1232	APSIDCLI SCHEME	NALGONDA	4A	150	11	1	96994	263606	886707	0	1150313

61	NLG1233	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	11004	27187	222897	0	250084
62	NLG1234	Exe.Engineer/APSIDC SRI AALETAMMA LIFT IRRIGATION SCHEME	NALGONDA	4A	250	11	1	89200	8594	1053190	0	1061784
63	NLG1237	PRESIDENT OF LI SCHEME	NALGONDA	4A	250	11	1	366325	0	2746501	0	2746501
64	NLG1256	THE EXECUTIVE ENGINEER RWS & S, DIVISION-1 NALGONDA	NALGONDA	4A	350	11	1	20310	0	219955	0	219955
65	NLG1268	PRESIDENT HANUMAN LIFT IRRIGATION	NALGONDA	4A	92	11	0	9096	0	61623	0	61623
66	NLG165	ADARSHA COMPREHENSIVE LICS	NALGONDA	4A	774.5	11	1	457832	2357869.66	4048955	0	6406824.66
67	NLG166	JAIKISAN COMPRAHENSIVE LICS	NALGONDA	4A	820	11	1	1319202	4957164	10361582	0	15318746
68	NLG167	VEMANA COMPRAHENSIVE LICS	NALGONDA	4A	273.5	11	4	788796	2581530.51	6906273	0	9487803.51
69	NLG168	JAIKISAN LICS NO.2	NALGONDA	4A	550	11	99	0	-243050.73	0	0	-243050.73
70	NLG178	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	300	11	1	523820	2312218.02	4155138	0	6467356.02
71	NLG179	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	85	11	1	75904	195348.38	619158	0	814506.38
72	NLG188	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	260	11	1	624173	4417658.58	6537151	0	10954809.58
73	NLG189	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	95	11	99	0	-100619.57	0	0	-100619.57
74	NLG190	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	270	11	1	828988	4073823.64	7450258	0	11524081.64
75	NLG191	TIRUMALASRINIVASA LICS STAGE	NALGONDA	4A	170	11	99	0	-138015.2	0	0	-138015.2
76	NLG192	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	210	11	1	612911	2045338.48	5226332	0	7271670.48
77	NLG214	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	210	11	1	285888	817634.49	2221440	0	3039074.49
78	NLG215	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	150	11	1	345157	2786706.02	3197447	0	5984153.02
79	NLG216	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	170	11	1	520094	1721140.04	4657654	0	6378794.04
80	NLG217	DY EE APSIDC L 1 SCHEME	NALGONDA	4A	245	11	1	318492	1232233.68	2630113	0	3862346.68
81	NLG218	EEAPSIDCMIRYALAGUDA	NALGONDA	4A	185	11	99	0	-176153.82	0	0	-176153.82
82	NLG219	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	91	11	99	0	-396070.47	0	0	-396070.47
83	NLG236	EXECUTIVEENGINEER/APSIDC	NALGONDA	4A	185	11	1	98128	176846.63	886074	0	1062920.63
84	NLG248	EE/APSIDC/NAGARJUNASAGAR	NALGONDA	4A	245	11	99	0	-22927.46	0	0	-22927.46
85	NLG261	EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	119092	192633.71	1034152	0	1226785.71
86	NLG270	DY EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	389701	1646658.33	3020966	0	4667624.33
87	NLG271	DY EXECUTIVE ENGINEER	NALGONDA	4A	230	11	99	0	-361957.45	0	0	-361957.45
88	NLG285	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	365	11	1	338236	436014.81	2686429	0	3122443.81
89	NLG286	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	360	11	99	0	-698605.59	0	0	-698605.59
90	NLG296	DEPUTY EXECUTIVE ENGINEER	NALGONDA	4A	225	11	1	352235	1929950.08	2867892	0	4797842.08
91	NLG309	EXECUTIVE ENGINEER	NALGONDA	4A	1310	11	1	1916098	5154891.69	14212691	0	19367582.69
92	NLG313	EXECUTIVE ENGINEER	NALGONDA	4A	115	11	99	0	-340679.01	0	0	-340679.01
93	NLG317	EXECUTIVE ENGINEER	NALGONDA	4A	155	11	99	0	1332276.56	0	0	1332276.56
94	NLG377	THE EXECUTIVE ENGINEER	NALGONDA	4A	160	11	99	0	-35482.2	0	0	-35482.2
95	NLG413	THE EXECUTIVE ENGINEER	NALGONDA	4A	100000	220	1	336099332	2950068728	2736299021	69242824	5617124925

96	NLG432	THE PRESIDENT,BRUNDAVANPUR,	NALGONDA	4A	175	11	1	419790	1269667.89	3024993	1172000	3122660.89
97	NLG455	THE PRESIDENT, LI SCHEME,	NALGONDA	4A	935	33	1	641200	594162.61	4859333	0	5453495.61
98	NLG562	THE EXECUTIVE ENGINEER.	NALGONDA	4A	190	11	1	175848	777256.28	1347646	0	2124902.28
99	NLG887	M/S. VIVEKANANDA LIFT IRRIGATI	NALGONDA	4A	450	11	1	471008	2810831.5	3925932	0	6736763.5
100	NLGT001	THE GENERAL MANAGER ENGG	NALGONDA	4A	1800	33	99	0	90	4476119	4476119	90
101	SDP2220	LIFT IRRIGATION NANGNOOR	SIDDIPET	4A	110	11	3	0	438872	202677	0	641549
102	SDP2221	SRI MAHADEVA SWAMY LIFT IRRIGATION	SIDDIPET	4A	110	11	3	4470	360034	207707	0	567741
103	SDP2278	EXECUTIVE ENGINEER, I.B DIVISION SIDDIPET 1	SIDDIPET	4A	1000	11	1	7620	4093053	1549155	0	5642208
104	SDP2279	EXECUTIVE ENGINEER, I.B DIVISION SIDDIPET 2	SIDDIPET	4A	1000	11	1	7030	4905486	1669013	0	6574499
105	SDP2553	EXECUTIVE ENGINEER RWS&S	SIDDIPET	4A	90	11	1	71284	0	485537.01	364645	120892.01
106	SGR1355	M/S. SRI RAMA MUTUAL AIDED	SANGAREDDY	4A	200	11	1	187494	182925.16	1497768	329891	1350802.16
107	SGR1356	THE PRESIDENT,GANGARAM LI	SANGAREDDY	4A	200	11	3	0	-190157.97	172807	3370	-20720.97
108	SGR1531	THE EXCECUTIVE ENGINEER (I &	SANGAREDDY	4A	250	11	3	0	4587577	866286	2332278.2	3121584.8
109	SGR1537	THE PRESIDENT. BORANCHA POCHAM	SANGAREDDY	4A	980	11	3	22880	1974700	1277301	572496	2679505
110	SGR1556	THE EXECUTIVE ENGINEER	SANGAREDDY	4A	250	11	3	0	4236427	825510.59	2193930.34	2868007.25
111	SGR1865	THE EXECUTIVE ENGINEER (I & CA	SANGAREDDY	4A	250	11	3	0	1651403	504658.48	1251124.48	904937
112	SGR2016	Executive Engineer RWS & S Division Sadasivpet	SANGAREDDY	4A	100	11	1	61372	263282	566492	0	829774
113	SGR2100	LIFT IRRIGATION SCHEME SINGOOR PROJECT	SANGAREDDY	4A	1600	33	1	542400	4718839	6183151	0	10901990
114	SGR2306	PRESIDENT PI BOGULLAMPALLY LI MUTUAL AIDED CO-OP SOCIETY	SANGAREDDY	4A	750	11	1	220204	1705309	2291990	271891	3725408
115	SGR2310	Director Phase 2 Bogulampally LiFT IRRIGATION	SANGAREDDY	4A	250	11	1	59794	323156	697550	21335	999371
116	SGR576	CHAIRMAN OF LI SCHEME	SANGAREDDY	4A	340	11	3	0	9702.78	325725	3370	332057.78
117	SGR864	M/S. EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	180	11	1	0	264640.88	218693	3370	479963.88
118	SGR865	M/S. EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	150	11	3	0	-82101.28	145628	3370	60156.72
119	SGR866	M/S.EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	210	11	3	0	-104410.93	196273	3370	88492.07
120	SPT1014	M/S. MAHANKALIGUDEM LI SCHEME	SURYAPET	4A	150	11	1	0	468358.36	155109	350997	272470.36
121	SPT1030	THE PRESIDENT. APSIDC LI SCHEM	SURYAPET	4A	1700	33	1	3128800	-23480657	115738467	77075434	15182376
122	SPT1080	M/S. GANGA BHAVANI LIFT IRRIGATION SCHEME	SURYAPET	4A	106	11	1	182977	1098950	1318743.01	781424	1636269.01
123	SPT1140	PRESIDENT BENIFICINARY COMITEE APSIDC LI SEHEME	SURYAPET	4A	4800	33	1	4749400	24547983	34268533	24547983	34268533



124	SPT1141	PRESIDENT BENEFICIARY COMITEE APSIDC LI SCHEME	SURYAPET	4A	2000	33	1	1132600	10189862	9399046	8346095	11242813
125	SPT1161	AMARAVARAM L.I.SCHEME	SURYAPET	4A	3600	33	1	3574900	29372796	27802899	29372796	27802899
126	SPT1195	PONUGODU LIFT IRRIGATION SCHEME	SURYAPET	4A	210	11	1	69582	13410	623515	13410	623515
127	SPT1196	MATTAMPALLY LIFT IRRIGATION SCHEME	SURYAPET	4A	105	11	1	17442	55401	236801	23959	268243
128	SPT1226	DEPUTY ENGINEER (APSIDC)	SURYAPET	4A	100	11	1	135647	338765	1089320.02	0	1428085.02
129	SPT1227	APSIDCL (34 lift)	SURYAPET	4A	95	11	1	165303	892962	1588807.01	0	2481769.01
130	SPT1229	APSIDC LI SCHEME YG THANDA	SURYAPET	4A	5000	33	1	2233800	5690544	19605962	2312849	22983657
131	SPT169	ASSISTANT ENGINEER	SURYAPET	4A	460	11	1	1261796	8049364.3	10703765	0	18753129.3
132	SPT195	MAHATMA GANDHI LICS	SURYAPET	4A	170	11	1	0	8050.57	171288	0	179338.57
133	SPT196	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	110	11	1	457080	-715254.19	11819994	0	11104739.81
134	SPT197	THE EXECUTIVE ENGINEER	SURYAPET	4A	185	11	99	0	-144426.13	0	0	-144426.13
135	SPT198	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	456	11	1	353934	2940204.1	3921804	0	6862008.1
136	SPT199	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	250.8	11	1	313743	1458764.13	2662948	0	4121712.13
137	SPT200	ASST ENGR APSIDC	SURYAPET	4A	130	11	1	227643	1146199.79	2360174	0	3506373.79
138	SPT201	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	85	11	1	108002	486276.01	885598.01	0	1371874.02
139	SPT202	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	450	11	1	1136423	4040568.99	9504484	0	13545052.99
140	SPT203	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	319.2	11	99	0	-241510.14	0	0	-241510.14
141	SPT204	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	381.9	11	1	752270	3334639.54	5990566	0	9325205.54
142	SPT205	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	176.7	11	99	0	-50034.37	0	0	-50034.37
143	SPT207	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	1140	11	1	2996952	32002581.46	31616924	0	63619505.46
144	SPT211	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	760	11	1	799560	4513262.39	6692433	0	11205695.39
145	SPT287	DY EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	305	11	1	664367	3306242.27	5720879	0	9027121.27
146	SPT299	DEPUTY EXECUTIVE ENGINEER	SURYAPET	4A	505	11	1	805848	2973045.55	6306985	0	9280030.55
147	SPT300	DEPUTY EXECUTIVE ENGINEER	SURYAPET	4A	965	11	1	1517425	9261037.59	12605195	0	21866232.59
148	SPT316	EXECUTIVE ENGINEER	SURYAPET	4A	165	11	99	0	-10715.13	0	0	-10715.13
149	SPT328	DY EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	145	11	99	0	-78417.69	0	0	-78417.69
150	SPT390	PRESIDENT	SURYAPET	4A	1400	11	3	0	8974597.17	2552508	993913	10533192.17
151	SPT461	THE PRESIDENT	SURYAPET	4A	85	11	1	190053	967807.23	1523872.01	524003	1967676.24
152	SPT481	THE PRESIDENT	SURYAPET	4A	200	11	3	0	106264.53	195150	142020	159394.53
153	SPT482	THE PRESIDENT	SURYAPET	4A	235	11	3	0	-130140.52	221734	24051	67542.48
154	SPT483	THE PRESIDENT	SURYAPET	4A	130	11	3	0	-1171126.67	125403	114048	-1159771.67
155	SPT642	M/S. RAI THU RAKSHA L.I. SCHEME	SURYAPET	4A	140	11	1	131409	2337523.14	1347655	541443	3143735.14
156	SPT643	M/S. UTHAM PADMAVATHI LIFT IRR	SURYAPET	4A	1790	11	1	75230	4624793.41	2466170	4912065	2178898.41
157	SPT747	M/S. KODANDA RAMASWAMY LIFT IR	SURYAPET	4A	228	11	1	268864	1386033.36	2133474	449396	3070111.36
158	SPT784	M/S. TADVAI LIFT IRRIGATION SC	SURYAPET	4A	210	11	1	105788	335717.17	912402.01	241709	1006410.18

159	SPT816	M/S. SEETHARAMANJANEYA LI SCHE	SURYAPET	4A	785	11	1	1073641	4954470.49	8569238.01	0	13523708.5
160	SPT820	M/S. UTTAM KUMAR REDDY LIFT IR	SURYAPET	4A	2395	33	1	4301700	18021221.6	35881383	24096746	29805858.6
161	SPT826	THE PRESIDENT BENEFICIARIES CO	SURYAPET	4A	1760	33	1	623400	2191944.45	5833116	2235974	5789086.45
162	SPT834	M/S. KARSHAKAMITRA LI SCHEME.	SURYAPET	4A	88	11	1	178838	604651.43	1210131.02	654895	1159887.45
163	SPT870	THE PRESIDENT MANCHYA THANDA L	SURYAPET	4A	400	11	1	884948	1658372.94	6093730	2074732	5677370.94
164	VKB2068	EXECUTIVE ENGINEER RWS	VIKARABAD	4A	450	11	1	437129	0	3116836	502200	2614636
165	VKB410	EXECUTIVE ENGINEER PWD	VIKARABAD	4A	155.5	11	3	0	-4674.71	151351	141187	5489.29
166	VKB413	DEPUTY EXECUTIVE ENGINEER	VIKARABAD	4A	120	11	3	0	1723.82	125229	26662	100290.82
167	WNP1107	EXECUTIVE ENGINEER.	WANAPARTHY	4A	100	11	3	0	2863	108658	25424	86097
168	WNP1238	EXCUTIVE ENGINEER	WANAPARTHY	4A	167500	132	22	333196000	2228153039	2627527177	0	4855680216
169	WNP1285	CHIEF EXCUTIVE OFFICER	WANAPARTHY	4A	850	11	1	2324390	1103104	15561021	0	16664125
170	WNP1286	CHIEF EXCUTIVE OFFICER	WANAPARTHY	4A	447	11	1	756762	619933	5292858	0	5912791
171	WNP488	DEPUTY EXECUTIVE ENGINEER	WANAPARTHY	4A	225	11	3	0	-50923.64	205188	1357	152907.36
172	WNP517	EXECUTIVE ENGINEER	WANAPARTHY	4A	3220	33	1	791692	-978966.87	7645972	0	6667005.13
173	WNP548	SRI KURUMURTHYRARAYA LIFT IRRI	WANAPARTHY	4A	1220	11	3	1945002	7492452.24	14336666	756147	21072971.24
174	WNP549	AMARACHINTHA L.I.SCHEME BENEFI	WANAPARTHY	4A	1620	33	1	2587700	14274487.09	20211179	0	34485666.09
175	WNP563	SRI KURUMURTHYRAYA	WANAPARTHY	4A	310	11	3	519400	2465885.39	3883620	1157309	5192196.39
176	WNP598	THE PRESIDENT GKRR SANGAM	WANAPARTHY	4A	120	11	3	0	17329.78	126262	13995	129596.78
177	WNP600	PRESIDENT MAHABUPAL SAMUDRAM,	WANAPARTHY	4A	120	11	3	21884	223155.52	311824	83215	451764.52
178	WNP605	K.HANUMANTH REDDY	WANAPARTHY	4A	1210	33	3	1366435	9997605.61	11493565	0	21491170.61
179	WNP613	KRISHNA REDDY, PRESIDENT	WANAPARTHY	4A	200	11	3	72264	629130.03	853871	259160	1223841.03
180	WNP665	G.BHASKAR REDDY (PRESIDENT).	WANAPARTHY	4A	208	11	3	0	-6812.13	195158	2502	185843.87
181	WNP666	G.BHASKAR REDDY (PRESIDENT)	WANAPARTHY	4A	970	33	3	0	-372988.39	685248	0	312259.61
182	WNP684	R.HANUMAI AH	WANAPARTHY	4A	245	11	3	0	-18254.29	222768	0	204513.71
183	WNP744	A.SHIVANARAYA,S/O.BUCHANNA.	WANAPARTHY	4A	1850	33	3	4267900	18128772.08	31771957	4187537	45713192.08
184	WNP752	THE PRESIDENT	WANAPARTHY	4A	2200	33	3	379680	106339.47	4123721	43143	4186917.47
185	WNP753	THE PRESIDENT	WANAPARTHY	4A	3000	33	3	793350	701564.62	7521636	1188058	7035142.62
186	WNP754	THE PRESIDENT	WANAPARTHY	4A	1800	33	3	597180	1039260.3	5598625	96108	6541777.3
187	WNP848	M/S. RAJIV BHIMA LIFT IRRIGATI	WANAPARTHY	4A	37500	132	1	24140280	207893377.2	215778175	0	423671552.2
188	WNP849	M/S. RAJIV BHIMA LIFT IRRIGATI	WANAPARTHY	4A	12500	132	1	10078370	69123314.38	85734453	0	154857767.4
189	WNP885	THE PRESIDENT.	WANAPARTHY	4A	503	11	3	375564	3324102.61	3489235	1270525	5542812.61
190	WNP895	THE PRESIDENT.	WANAPARTHY	4A	840	11	3	736800	6094672.93	6426040	904379	11616333.93
191	YDD1235	PRESIDENT SRI BHEEMALINGESHWRASWAMY LIFT IRRIGATION SOCIETY	YADADRI	4A	480	11	1	57886	0	890330	0	890330
192	YDD686	THE PRESIDENT.	YADADRI	4A	187	11	1	288721	5001100.05	2113820.01	4742283	2372637.06

**SOUTHERN POWER DISTRIBUTION COMPANY OF TS LIMITED**

**DCB Cumulative Report for 2019-20 Financial Year**

SL.No.	SCNO	NAME	CIR_NAME	CAT	CMD	VOLTAGE	RDG_STAT	SALES	OB	DEMAND	COLLECTION	CB
1	GDL1294	EXECUTIVE ENGINEER APSIDC ALAMPUR LIFT IRRIGATION	GADWAL	4A	1250	33	1	756800	2332010	6852421	0	9184431
2	GDL1295	PRESIDENT KYATHUR LIFT IRRIGATIONS SCHEMEII	GADWAL	4A	2000	33	1	221200	11088111	5686024	0	16774135
3	GDL1300	EXECUTIVE ENGINEER RDS DIVISION JOGULAMBA GADWAL	GADWAL	4A	23157.8	132	1	11417100	15379780	93226739	17709695	90896824
4	GDL489	DEPUTY EXECUTIVE ENGINEER	GADWAL	4A	180	11	1	98239	1101545.94	971781	389510	1683816.94
5	GDL501	EXECUTIVE ENGINEER/APSIDC	GADWAL	4A	225	11	99	0	0	0	0	0
6	GDL581	PRESIDENT	GADWAL	4A	405	11	1	378624	5177377.51	3790354	889954	8077777.51
7	GDL614	P.VASA REDDY, PRESIDENT	GADWAL	4A	960	11	1	607027	22109753.3	15102995	3660138	33552610.3
8	GDL620	THE PRESIDENT	GADWAL	4A	120	11	1	228746	4219543.52	2582869	1557306	5245106.52
9	GDL621	THE PRESIDENT	GADWAL	4A	100	11	1	129936	1604646.17	1261568	0	2866214.17
10	GDL971	THE EXECUTIVE ENGINEER.	GADWAL	4A	87500	220	1	62316000	873281258.6	591708619	4312484	1460677394
11	GDL985	THE EXECUTIVE ENGINEER.	GADWAL	4A	68750	220	2	75426000	966396213	667770782	262315303	1371851692
12	MBN1086	M/S. KOILSAGAR LIFT IRRIGATION	MAHABOBNAGAR	4A	18750	132	1	20346000	252907748	187275668	0	440183416
13	MBN1106	EXECUTIVE ENGINEER.	MAHABOBNAGAR	4A	18750	132	1	29826000	366152836	266961934	1885950	631228820
14	MBN1115	EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	13000	132	22	9732400	130441352	95205127	135499762	90146717
15	MBN324	KALLAHALLI VEERANJANEYA FARMER	MAHABOBNAGAR	4A	300	11	1	289454	1956613.45	2467359	0	4423972.45
16	MBN325	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	875	11	1	1312911	28559240.76	14168469	7675835	35051874.76
17	MBN328	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	750	11	1	432912	3312747.35	4249528	1640679	5921596.35
18	MBN395	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	625	11	1	0	297035.93	617894	0	914929.93
19	MBN432	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	270	11	1	0	148621.16	282655	0	431276.16
20	MBN437	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	100	11	1	119954	868053.81	1099020	354554	1612519.81
21	MBN487	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	180	11	1	265984	2563232.49	2314896	340976	4537152.49
22	MBN558	KONDADODDI L.I.SCHEME BENEFICI	MAHABOBNAGAR	4A	440	11	1	0	-22504.98	402127	0	379622.02
23	MBN624	SRI RAGHAVENDRA LIFT IRRIGATIO	MAHABOBNAGAR	4A	510	11	1	739454	8364237.11	7128566	1783099	13709704.11
24	MBN633	DY. EXECUTIVE ENGINEER,APSIDC	MAHABOBNAGAR	4A	300	11	1	436564	4163330.49	3738377	950324	6951383.49
25	MBN635	DY. EXECUTIVE ENGINEER,APSIDC.	MAHABOBNAGAR	4A	600	11	1	474719	5919816.39	4585201	1091326	9413691.39
26	MBN636	DY.EXECUTIVE ENGINEER,APSIDC.	MAHABOBNAGAR	4A	510	11	1	488492	6154257	4556894	1633587	9077564

27	MBN650	DY.EXECUTIVE ENGINEER, APSIDC	MAHABOBNAGAR	4A	405	11	1	326521	4767594.9	3383487	578174	7572907.9
28	MBN660	DY.EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	200	11	1	66088	1532114.06	1018141	377968	2172287.06
29	MBN886	THE EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	37000	132	22	28310000	330439338.5	257131055	343519800	244050593.5
30	MCL2923	EXECUTIVE OFFICER (WW)	MEDCHAL	4A	220	11	1	446876	521895	3263959	0	3785854
31	MDK1586	THE PRESIDENT.	MEDAK	4A	300	11	1	230436	8098471	2922930	816271	10205130
32	MDK1879	THE PRESIDENT.	MEDAK	4A	150	11	1	126526	6893898.02	1946334.01	381274	8458958.03
33	MDK1880	THE PRESIDENT.	MEDAK	4A	300	11	3	0	6781430	1262802	468775	7575457
34	MDK1971	M/S.THE PRESIDENT	MEDAK	4A	80	11	1	102269	3517536	2450073	26671	5940938
35	MDK2008	TOOPRAN LI SCHEME	MEDAK	4A	120	11	3	0	366868	177815	17343	527340
36	MDK2019	THE PRESIDENT OF APSIDC LIFT IRRIGATION	MEDAK	4A	80	11	1	85022	2859300.01	1041663	89786	3811177.01
37	MDK2546	EXECUTIVE ENGINEER	MEDAK	4A	140	11	1	79118	2797624	1338742	0	4136366
38	MDK410	DY EXECUTIVE ENGINEER	MEDAK	4A	120	11	1	88258	2752265.39	1135647	68952	3818960.39
39	MDK546	DY.EXECUTIVE ENGINEER	MEDAK	4A	300	11	3	0	346685.97	368317	3370	711632.97
40	MDK557	EXECUTIVE ENGINEER	MEDAK	4A	180	11	3	0	249317.48	238811	3370	484758.48
41	NGK1242	EXECUTIVE ENGINEER MGKLIS, DIVISION 2, NAGARKURNOOL	NAGARKURNOOL	4A	167500	220	22	301026000	3518622560	2591312837	2225879512	3884055885
42	NGK1298	SRI RAMA TERTHESWARA LIFT IRRIGATION	NAGARKURNOOL	4A	250	11	1	207342	132294	1672610	0	1804904
43	NGK616	SRI RAMA LIFT IRRIGATION	NAGARKURNOOL	4A	600	11	3	0	415991.59	608847	161770	863068.59
44	NGK617	SRI RAMA LIFT IRRIGATION	NAGARKURNOOL	4A	85	11	3	0	91769.32	111107	13455	189421.32
45	NGK623	MADHAVA SWAMY NAGAR LIS,	NAGARKURNOOL	4A	220	11	3	0	167816.3	242464	0	410280.3
46	NGK918	EXECUTIVE ENGINEER.	NAGARKURNOOL	4A	187500	220	22	393206657	4237016715	3320189959	2174347610	5382859064
47	NLG1082	SHATHINAGAR LIFT IRRIGATION SCHEME	NALGONDA	4A	180	11	1	400765	6384884.02	4306042	1858820	8832106.02
48	NLG1083	DAMARCHARLA LIFT IRRIGATION	NALGONDA	4A	150	11	1	521707	7426970	4899748	2618279	9708439
49	NLG1110	NADIGADDA LIFT IRRIGATION SCHEME	NALGONDA	4A	161	11	1	357561	4611098	3412417	204711	7818804
50	NLG1145	DATHATREYA LIFT IRRIGATION SCHEME	NALGONDA	4A	167	11	1	103531	4451916	2161368	250379	6362905
51	NLG1156	GANDHI NAGAR LIFT IRRIGATION SCHEME	NALGONDA	4A	523	11	1	174920	5601307	2662161	542196	7721272
52	NLG1160	M/s The President L16 LI Scheme	NALGONDA	4A	310	11	1	179394	4335262	2180357	4671001	1844618
53	NLG1181	CEO Zillaparishad, Nalgonda	NALGONDA	4A	135	11	1	32346	2709036.01	827183	0	3536219.01
54	NLG1198	THE EXECUTIVE ENGINEER AMRSLBC PROJECT	NALGONDA	4A	15000	132	1	5569500	133826193	70317331.01	0	204143524

55	NLG120	EXECUTIVEENGINEER/APSIDC	NALGONDA	4A	235	11	1	0	-113018.57	225460	262716	-150274.57
56	NLG121	RAMALINGESWARA LICS 2	NALGONDA	4A	315	11	1	398116	3387318.04	3493240	3643660	3236898.04
57	NLG122	DY.EXECUTIVE ENGINEER	NALGONDA	4A	540	11	1	690627	9574386.39	6643721	10732133	5485974.39
58	NLG1229	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	54206	783228	639467	903970	518725
59	NLG1230	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	89478	1315495.01	1059867	1450467	924895.01
60	NLG1231	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	300	11	1	2058	606515	402783	628155	381143
61	NLG1232	APSIDCLI SCHEME	NALGONDA	4A	150	11	1	87532	1150313	939759	1314558	775514
62	NLG1233	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	2781	250084	214209	267835	196458
63	NLG1234	Exe.Engineer/APSIDC SRI AALETAMMA LIFT IRRIGATION SCHEME	NALGONDA	4A	250	11	1	84898	1061784	1711873	902835	1870822
64	NLG1237	PRESIDENT OF LI SCHEME	NALGONDA	4A	250	11	1	219618	2746501	2180202	101327	4825376
65	NLG1256	THE EXCUTIVE ENGINEER RWS & S, DIVISION-1 NALGONDA	NALGONDA	4A	350	11	1	232137	219955	1825417	0	2045372
66	NLG1268	PRESIDENT HANUMAN LIFT IRRIGATION	NALGONDA	4A	92	11	1	129772	61623	1000630	0	1062253
67	NLG1286	Paradevi Lift Irrigation Scheme	NALGONDA	4A	450	11	1	50969	0	1278804	0	1278804
68	NLG165	ADARSHA COMPREHENSIVE LICS	NALGONDA	4A	774.5	11	4	362664	6406824.66	3959026	7023764	3342086.66
69	NLG166	JAIKISAN COMPRAHENSIVE LICS	NALGONDA	4A	820	11	1	1196258	15318746	11165666	17313847	9170565
70	NLG167	VEMANA COMPRAHENSIVE LICS	NALGONDA	4A	273.5	11	1	790416	9487803.51	7918196	10914333	6491666.51
71	NLG168	JAIKISAN LICS NO.2	NALGONDA	4A	550	11	99	0	-243050.73	0	0	-243050.73
72	NLG178	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	300	11	1	524730	6467356.02	4730783	7528306	3669833.02
73	NLG179	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	85	11	1	85864	814506.38	780551	1186505	408552.38
74	NLG188	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	260	11	1	566316	10954809.58	6365411	12431535	4888685.58
75	NLG189	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	95	11	99	0	-100619.57	0	0	-100619.57
76	NLG190	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	270	11	1	675016	11524081.64	7166804	13284014	5406871.64
77	NLG191	TIRUMALASRINIVASA LICS STAGE	NALGONDA	4A	170	11	99	0	-138015.2	0	30667	-168682.2
78	NLG192	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	210	11	1	544294	7271670.48	5529844.02	8445583	4355931.5
79	NLG214	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	210	11	1	248405	3039074.49	2276077	4284083	1031068.49
80	NLG215	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	150	11	1	359501	5984153.02	3758936	6673713	3069376.02
81	NLG216	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	170	11	1	298200	6378794.04	3771522	7262986	2887330.04
82	NLG217	DY EE APSIDC L 1 SCHEME	NALGONDA	4A	245	11	1	326264	3862346.68	2976684	4334314	2504716.68
83	NLG218	EEAPSIDCMIRYALAGUDA	NALGONDA	4A	185	11	99	0	-176153.82	0	0	-176153.82
84	NLG219	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	91	11	99	0	-396070.47	0	0	-396070.47
85	NLG236	EXECUTIVEENGINEER/APSIDC	NALGONDA	4A	185	11	1	70746	1062920.63	872265.01	1417260	517925.64
86	NLG248	EE/APSIDC/NAGARJUNASAGAR	NALGONDA	4A	245	11	99	0	-22927.46	0	0	-22927.46

87	NLG261	EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	63713	1226785.71	902333	241420494	-239291375.3
88	NLG270	DY EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	353622	4667624.33	3268641.01	5197498	2738767.34
89	NLG271	DY EXECUTIVE ENGINEER	NALGONDA	4A	230	11	99	0	-361957.45	0	0	-361957.45
90	NLG285	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	365	11	1	245027	3122443.81	2629549	3669824	2082168.81
91	NLG286	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	360	11	99	0	-698605.59	0	0	-698605.59
92	NLG296	DEPUTY EXECUTIVE ENGINEER	NALGONDA	4A	225	11	1	309558	4797842.08	2962994	5326352	2434484.08
93	NLG309	EXECUTIVE ENGINEER	NALGONDA	4A	1310	11	1	1798700	19367582.69	15881330	22631404	12617508.69
94	NLG313	EXECUTIVE ENGINEER	NALGONDA	4A	115	11	99	0	-340679.01	0	105536	-446215.01
95	NLG317	EXECUTIVE ENGINEER	NALGONDA	4A	155	11	99	0	1332276.56	0	0	1332276.56
96	NLG377	THE EXECUTIVE ENGINEER	NALGONDA	4A	160	11	99	0	-35482.2	0	0	-35482.2
97	NLG413	THE EXECUTIVE ENGINEER	NALGONDA	4A	100000	220	1	402263933	5617124925	3489785935	3333468085	5773442775
98	NLG432	THE PRESIDENT, BRUNDAVANPUR,	NALGONDA	4A	175	11	1	215030	3122660.89	2055431	5928683	-750591.11
99	NLG455	THE PRESIDENT, LI SCHEME,	NALGONDA	4A	935	33	1	168000	5453495.61	2651662	1883021	6222136.61
100	NLG523	HTE EXECUTIVE ENGINEER.	NALGONDA	4A	500	11	99	0	1976124	0	0	1976124
101	NLG562	THE EXECUTIVE ENGINEER.	NALGONDA	4A	190	11	1	187250	2124902.28	1690629	642498	3173033.28
102	NLG887	M/S. VIVEKANANDA LIFT IRRIGATI	NALGONDA	4A	450	11	1	432404	6736763.5	4433223	2106458	9063528.5
103	SDP2220	LIFT IRRIGATION NANGNOOR	SIDDIPET	4A	110	11	1	70455	641549	645649	3370	1283828
104	SDP2221	SRI MAHADEVA SWAMY LIFT IRRIGATION	SIDDIPET	4A	110	11	1	66255	567741	626746	3461	1191026
105	SDP2278	EXECUTIVE ENGINEER, I.B DIVISION SIDDIPET 1	SIDDIPET	4A	1000	11	1	0	5642208	1678966	0	7321174
106	SDP2279	EXECUTIVE ENGINEER, I.B DIVISION SIDDIPET 2	SIDDIPET	4A	1000	11	1	2370	6574499	1818529	0	8393028
107	SDP2553	EXECUTIVE ENGINEER RWS&S	SIDDIPET	4A	90	11	1	201330	120892.01	1865343.28	19440	1966795.29
108	SDP2589	EXECUTIVE ENGINEER	SIDDIPET	4A	6000	400	22	20970000	0	193638718	0	193638718
109	SGR1355	M/S. SRI RAMA MUTUAL AIDED	SANGAREDDY	4A	200	11	1	81126	1350802.16	959970.01	0	2310772.17
110	SGR1356	THE PRESIDENT, GANGARAM LI	SANGAREDDY	4A	200	11	3	0	-20720.97	186370	0	165649.03
111	SGR1531	THE EXECUTIVE ENGINEER (I &	SANGAREDDY	4A	250	11	99	0	3121584.8	0	0	3121584.8
112	SGR1537	THE PRESIDENT. BORANCHA POCHAM	SANGAREDDY	4A	980	11	3	0	2679505	1327317	0	4006822
113	SGR1556	THE EXECUTIVE ENGINEER	SANGAREDDY	4A	250	11	99	0	2868007.25	0	0	2868007.25
114	SGR1865	THE EXECUTIVE ENGINEER (I & CA	SANGAREDDY	4A	250	11	99	0	904937	0	0	904937
115	SGR2016	Executive Engineer RWS & S Division Sadasivpet	SANGAREDDY	4A	100	11	1	51297	829774	605924	0	1435698

116	SGR2100	LIFT IRRIGATION SCHEME SINGOOR PROJECT	SANGAREDDY	4A	1600	33	1	0	10901990	3150168	0	14052158
117	SGR2306	PRESIDENT PI BOGULLAMPALLY LI MUTUAL AIDED CO-OP SOCIETY	SANGAREDDY	4A	750	11	1	79742	3725408	1786573	0	5511981
118	SGR2310	Director Phase 2 Bogulampally LiFT IRRIGATION	SANGAREDDY	4A	250	11	1	14509	999371	534209	0	1533580
119	SGR576	CHAIRMAN OF LI SCHEME	SANGAREDDY	4A	340	11	99	0	332057.78	219871	551929	-0.22
120	SGR864	M/S. EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	180	11	99	0	479963.88	144469	437534	186898.88
121	SGR865	M/S. EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	150	11	99	0	60156.72	93146	153303	-0.28
122	SGR866	M/S.EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	210	11	99	0	88492.07	126023	214515	0.07
123	SPT1014	M/S. MAHANKALIGUEDEM LI SCHEME	SURYAPET	4A	150	11	1	0	272470.36	152002	127418	297054.36
124	SPT1030	THE PRESIDENT. APSIDC LI SCHEM	SURYAPET	4A	1700	33	1	2810500	15182376	22556825	190125	37549076
125	SPT1080	M/S. GANGA BHAVANI LIFT IRRIGATION SCHEME	SURYAPET	4A	106	11	1	144114	1636269.01	1225053.01	524280	2337042.02
126	SPT1140	PRESIDENT BENEFICIARY COMITEE APSIDC LI SEHEME	SURYAPET	4A	4800	33	1	2445800	34268533	25131671	256990	59143214
127	SPT1141	PRESIDENT BENEFICIARY COMITEE APSIDC LI SCHEME	SURYAPET	4A	2000	33	1	798400	11242813	8751637	1933938	18060512
128	SPT1161	AMARAVARAM L.I.SCHEME	SURYAPET	4A	3600	33	1	1867200	27802899	20585421	257060	48131260
129	SPT1195	PONUGODU LIFT IRRIGATION SCHEME	SURYAPET	4A	210	11	1	124469	623515	1278106	1685	1899936
130	SPT1196	MATTAMPALLY LIFT IRRIGATION SCHEME	SURYAPET	4A	105	11	1	39900	268243	427352	1692	693903
131	SPT1226	DEPUTY ENGINEER (APSIDC)	SURYAPET	4A	100	11	1	139466	1428085.02	1269572.01	1581883	1115774.03
132	SPT1227	APSIDCL (34 lift)	SURYAPET	4A	95	11	1	137310	2481769.01	1446960	2686388	1242341.01
133	SPT1229	APSIDC LI SCHEME YG THANDA	SURYAPET	4A	5000	33	1	1319500	22983657	17987478	173288	40797847
134	SPT169	ASSISTANT ENGINEER	SURYAPET	4A	460	11	1	1178010	18753129.3	10941759	21488152	8206736.3
135	SPT195	MAHATMA GANDHI LICS	SURYAPET	4A	170	11	1	0	179338.57	206246	197912	187672.57
136	SPT196	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	110	11	1	568070	11104739.81	7055698	12665609	5494828.81
137	SPT197	THE EXECUTIVE ENGINEER	SURYAPET	4A	185	11	99	0	-144426.13	0	0	-144426.13
138	SPT198	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	456	11	1	432715	6862008.1	4329246	8041307	3149947.1
139	SPT199	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	250.8	11	1	249486	4121712.13	2537338	5474747	1184303.13
140	SPT200	ASST ENGR APSIDC	SURYAPET	4A	130	11	1	333188	3506373.79	3217017	4153792	2569598.79
141	SPT201	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	85	11	1	105863	1371874.02	1021367.01	1539139	854102.03
142	SPT202	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	450	11	1	967494	13545052.99	10193485	16023338	7715199.99

143	SPT203	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	319.2	11	99	0	-241510.14	0	0	-241510.14
144	SPT204	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	381.9	11	1	619223	9325205.54	7162814	10101985	6386034.54
145	SPT205	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	176.7	11	99	0	-50034.37	0	0	-50034.37
146	SPT207	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	1140	11	1	3543500	63619505.46	39757816	44905345	58471976.46
147	SPT211	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	760	11	1	867074	11205695.39	7996167	12470106	6731756.39
148	SPT287	DY EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	305	11	1	844457	9027121.27	7567542	9979647	6615016.27
149	SPT299	DEPUTY EXECUTIVE ENGINEER	SURYAPET	4A	505	11	1	782880	9280030.55	7138429	10438969	5979490.55
150	SPT300	DEPUTY EXECUTIVE ENGINEER	SURYAPET	4A	965	11	1	1825960	21866232.59	15872441	25275642	12463031.59
151	SPT316	EXECUTIVE ENGINEER	SURYAPET	4A	165	11	99	0	-10715.13	0	0	-10715.13
152	SPT328	DY EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	145	11	99	0	-78417.69	0	13604	-92021.69
153	SPT390	PRESIDENT	SURYAPET	4A	1400	11	3	0	10533192.17	2685969	1940271	11278890.17
154	SPT461	THE PRESIDENT	SURYAPET	4A	85	11	1	137984	1967676.24	1276902.01	572797	2671781.25
155	SPT481	THE PRESIDENT	SURYAPET	4A	200	11	3	0	159394.53	206566	0	365960.53
156	SPT482	THE PRESIDENT	SURYAPET	4A	235	11	3	0	67542.48	236456	0	303998.48
157	SPT483	THE PRESIDENT	SURYAPET	4A	130	11	3	0	-1159771.67	131235	0	-1028536.67
158	SPT642	M/S. RAI THU RAKSHA L.I. SCHEME	SURYAPET	4A	140	11	1	50409	3143735.14	734027	5563688	-1685925.86
159	SPT643	M/S. UTHAM PADMAVATHI LIFT IRR	SURYAPET	4A	1790	11	1	0	2178898.41	1550468	1372573	2356793.41
160	SPT747	M/S. KODANDA RAMASWAMY LIFT IR	SURYAPET	4A	228	11	1	244168	3070111.36	2072042	6115901	-973747.64
161	SPT784	M/S. TADVAI LIFT IRRIGATION SC	SURYAPET	4A	210	11	1	109109	1006410.18	1095015	154998	1946427.18
162	SPT816	M/S. SEETHARAMANJANEYA LI SCHE	SURYAPET	4A	785	11	1	798716	13523708.5	8065591.02	14703111	6886188.52
163	SPT820	M/S. UTTAM KUMAR REDDY LIFT IR	SURYAPET	4A	2395	33	1	3625700	29805858.6	31917404	1896788	59826474.6
164	SPT826	THE PRESIDENT BENEFICIARIES CO	SURYAPET	4A	1760	33	1	151200	5789086.45	3848529	125360	9512255.45
165	SPT834	M/S. KARSHAKAMITRA LI SCHEME.	SURYAPET	4A	88	11	1	188122	1159887.45	1419821	112436	2467272.45
166	SPT870	THE PRESIDENT MANCHYA THANDA L	SURYAPET	4A	400	11	1	875888	5677370.94	7065029	52008	12690391.94
167	VKB2068	EXECUTIVE ENGINEER RWS	VIKARABAD	4A	450	11	1	1607011	2614636	11181977	320660	13475953
168	VKB410	EXECUTIVE ENGINEER PWD	VIKARABAD	4A	155.5	11	1	717	5489.29	177110	22240	160359.29
169	VKB413	DEPUTY EXECUTIVE ENGINEER	VIKARABAD	4A	120	11	3	0	100290.82	144665	0	244955.82
170	WNP1107	EXECUTIVE ENGINEER.	WANAPARTHY	4A	100	11	3	0	86097	124657	0	210754
171	WNP1238	EXCUTIVE ENGINEER	WANAPARTHY	4A	167500	132	22	368864000	4855680216	3208575240	2022660703	6041594753
172	WNP1285	CHIEF EXCUTIVE OFFICER	WANAPARTHY	4A	850	11	1	3626420	16664125	26930241	0	43594366
173	WNP1286	CHIEF EXCUTIVE OFFICER	WANAPARTHY	4A	447	11	1	1254047	5912791	9374577	0	15287368
174	WNP488	DEPUTY EXECUTIVE ENGINEER	WANAPARTHY	4A	225	11	3	0	152907.36	244298	0	397205.36
175	WNP517	EXECUTIVE ENGINEER	WANAPARTHY	4A	3220	33	1	138500	6667005.13	5152014	0	11819019.13
176	WNP548	SRI KURUMURTHYRARAYA LIFT IRR	WANAPARTHY	4A	1220	11	1	2368452	21072971.24	19393185	673515	39792641.24



177	WNP549	AMARACHINTHA L.I.SCHEME BENEFI	WANAPARTHY	4A	1620	33	1	1778500	34485666.09	17929815	2713255	49702226.09
178	WNP563	SRI KURUMURTHYRAYA	WANAPARTHY	4A	310	11	1	693344	5192196.39	5457662	1407695	9242163.39
179	WNP598	THE PRESIDENT GKRR SANGAM	WANAPARTHY	4A	120	11	3	0	129596.78	149580	0	279176.78
180	WNP600	PRESIDENT MAHABUPAL SAMUDRAM,	WANAPARTHY	4A	120	11	3	0	451764.52	207542	75833	583473.52
181	WNP605	K.HANUMANTH REDDY	WANAPARTHY	4A	1210	33	1	737550	21491170.61	8913632	7212850	23191952.61
182	WNP613	KRISHNA REDDY, PRESIDENT	WANAPARTHY	4A	200	11	1	54284	1223841.03	763625	239033	1748433.03
183	WNP665	G.BHASKAR REDDY (PRESIDENT).	WANAPARTHY	4A	208	11	3	0	185843.87	235058	0	420901.87
184	WNP666	G.BHASKAR REDDY (PRESIDENT)	WANAPARTHY	4A	970	33	3	0	312259.61	789773	0	1102032.61
185	WNP684	R.HANUMAIAH	WANAPARTHY	4A	245	11	3	0	204513.71	268263	0	472776.71
186	WNP744	A.SHIVANARAYA,S/O.BUCHANNA.	WANAPARTHY	4A	1850	33	1	1746700	45713192.08	20333318	568943	65477567.08
187	WNP752	THE PRESIDENT	WANAPARTHY	4A	2200	33	1	61760	4186917.47	2881749	30922	7037744.47
188	WNP753	THE PRESIDENT	WANAPARTHY	4A	3000	33	1	28425	7035142.62	23458191	19734000	10759333.62
189	WNP754	THE PRESIDENT	WANAPARTHY	4A	1800	33	1	455900	6541777.3	5324118	584436	11281459.3
190	WNP848	M/S. RAJIV BHIMA LIFT IRRIGATI	WANAPARTHY	4A	37500	132	1	23732000	423671552.2	242218128	425549122	240340558.2
191	WNP849	M/S. RAJIV BHIMA LIFT IRRIGATI	WANAPARTHY	4A	12500	132	1	9690000	154857767.4	95180607	175717764	74320610.38
192	WNP885	THE PRESIDENT.	WANAPARTHY	4A	503	11	1	274428	5542812.61	3129167	2317139	6354840.61
193	WNP895	THE PRESIDENT.	WANAPARTHY	4A	840	11	1	515370	11616333.93	5800306	4191122	13225517.93
194	YDD1235	PRESIDENT SRI BHEEMALINGESHWRASWAMY LIFT IRRIGATION SOCIETY	YADADRI	4A	480	11	1	443679	890330	3502124	0	4392454
195	YDD686	THE PRESIDENT.	YADADRI	4A	187	11	1	279249	2372637.06	2212332	149396	4435573.06

**SOUTHERN POWER DISTRIBUTION COMPANY OF TS LIMITED**

**DCB Cumulative Report for 2020-21 Financial Year**

SL.No.	SCNO	NAME	CIR_NAME	CAT	CMD	VOLTAGE	RDG_STAT	SALES	OB	DEMAND	COLLECTION	CB
1	GDL1294	EXECUTIVE ENGINEER APSIDC ALAMPUR LIFT IRRIGATION	GADWAL	4A	1250	33	1	1066000	9184431	9255473.31	5911396.47	12528507.84
2	GDL1295	PRESIDENT KYATHUR LIFT IRRIGATIONS SCHEMEII	GADWAL	4A	2000	33	4	1252400	16774135	11162676	9350798.11	18586012.89
3	GDL1300	EXECUTIVE ENGINEER RDS DIVISION JOGULAMBA GADWAL	GADWAL	4A	23157.8	132	1	10791100	90896824	96940633	57691839.48	130145617.5
4	GDL489	DEPUTY EXECUTIVE ENGINEER	GADWAL	4A	180	11	1	104095	1683816.94	950043	1735010.94	898849
5	GDL501	EXECUTIVE ENGINEER/APSIDC	GADWAL	4A	225	11	99	0	0	0	0	0
6	GDL581	PRESIDENT	GADWAL	4A	405	11	1	375080	8077777.51	3386110	8502757.51	2961130
7	GDL614	P.VASA REDDY, PRESIDENT	GADWAL	4A	960	11	1	585488	33552610.3	6854411	34609226.3	5797795
8	GDL620	THE PRESIDENT	GADWAL	4A	120	11	1	222642	5245106.52	2240291	5639396.52	1846001
9	GDL621	THE PRESIDENT	GADWAL	4A	100	11	1	132316	2866214.17	1180820	3061659.17	985375
10	GDL971	THE EXECUTIVE ENGINEER.	GADWAL	4A	87500	220	1	33528667	1460677394	409711158	816586816.4	1053801735
11	GDL985	THE EXECUTIVE ENGINEER.	GADWAL	4A	68750	220	1	39451665	1371851692	465761833	770832364.6	1066781160
12	MBN1086	M/S. KOILSAGAR LIFT IRRIGATION	MAHABOBNAGAR	4A	18750	132	1	6732000	440183416	100254228	245140975	295296669
13	MBN1106	EXECUTIVE ENGINEER.	MAHABOBNAGAR	4A	18750	132	1	10476000	631228820	142900830	351074166	423055484
14	MBN1115	EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	13000	132	22	2526540	90146717	41534361	51358597	80322481
15	MBN324	KALLAHALLI VEERANJANEYA FARMER	MAHABOBNAGAR	4A	300	11	1	346084	4423972.45	2737900.01	4874066	2287806.46
16	MBN325	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	875	11	1	1262598	35051874.76	11237418	36645255	9644037.76
17	MBN328	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	750	11	1	510360	5921596.35	4260633.01	6512059	3670170.36
18	MBN395	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	625	11	99	0	914929.93	103579	948754	69754.93
19	MBN432	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	270	11	99	0	431276.16	50435	447272	34439.16
20	MBN437	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	100	11	1	162964	1612519.81	1307341	1803433	1116427.81
21	MBN487	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	180	11	1	189549	4537152.49	1681448	4779393	1439207.49
22	MBN558	KONDADODDI L.I.SCHEME BENEFICI	MAHABOBNAGAR	4A	440	11	99	0	379622.02	61645	0	441267.02
23	MBN624	SRI RAGHAVENDRA LIFT IRRIGATIO	MAHABOBNAGAR	4A	510	11	1	850457	13709704.11	6831916	14666683	5874937.11
24	MBN633	DY. EXECUTIVE ENGINEER,APSIDC	MAHABOBNAGAR	4A	300	11	1	486645	6951383.49	3875429	7651440	3175372.49
25	MBN635	DY. EXECUTIVE ENGINEER,APSIDC.	MAHABOBNAGAR	4A	600	11	1	593557	9413691.39	5003074	10041990	4374775.39
26	MBN636	DY.EXECUTIVE ENGINEER,APSIDC.	MAHABOBNAGAR	4A	510	11	1	736708	9077564	5770717	9753644	5094637
27	MBN650	DY.EXECUTIVE ENGINEER, APSIDC	MAHABOBNAGAR	4A	405	11	1	182039	7572907.9	2074763	7997789	1649881.9
28	MBN660	DY.EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	200	11	1	36519	2172287.06	598319	2308511.9	462094.16
29	MBN886	THE EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	37000	132	22	11006000	244050593.5	132053590	137849972	238254211.5
30	MCL2923	EXECUTIVE OFFICER (WW)	MEDCHAL	4A	220	11	1	469942	3785854	3891396.01	0	7677250.01
31	MDK1586	THE PRESIDENT.	MEDAK	4A	300	11	1	280528	10205130	3824150	10336667	3692613

32	MDK1879	THE PRESIDENT.	MEDAK	4A	150	11	1	32527	8458958.03	824716	8558398.03	725276
33	MDK1880	THE PRESIDENT.	MEDAK	4A	300	11	3	0	7575457	687917	7668609	594765
34	MDK1971	M/S.THE PRESIDENT	MEDAK	4A	80	11	1	80333	5940938	3334608	6014907	3260639
35	MDK2008	TOOPRAN LI SCHEME	MEDAK	4A	120	11	1	67755	527340	570774	538959	559155
36	MDK2019	THE PRESIDENT OF APSIDC LIFT IRRIGATION	MEDAK	4A	80	11	3	921	3811177.01	316119	3857497.01	269799
37	MDK410	DY EXECUTIVE ENGINEER	MEDAK	4A	120	11	1	38828	3818960.39	599770	3867338.39	551392
38	MDK546	DY.EXECUTIVE ENGINEER	MEDAK	4A	300	11	3	0	711632.97	345337	732499.97	324470
39	MDK557	EXECUTIVE ENGINEER	MEDAK	4A	180	11	3	0	484758.48	221364	498734.6	207387.88
40	NGK1242	EXECUTIVE ENGINEER MGKLIS,DIVISION2,NAGARKURNOOL	NAGARKURNOOL	4A	167500	220	22	198220000	3884055885	1902419646	2320179148	3466296383
41	NGK1298	SRI RAMA TERTHESWARA LIFT IRRIGATION	NAGARKURNOOL	4A	250	11	1	191073	1804904	1663530.23	2023505.46	1444928.77
42	NGK616	SRI RAMA LIFT IRRIGATION	NAGARKURNOOL	4A	600	11	3	0	863068.59	609375	917512.59	554931
43	NGK617	SRI RAMA LIFT IRRIGATION	NAGARKURNOOL	4A	85	11	3	0	189421.32	109677	200818.32	98280
44	NGK623	MADHAVA SWAMY NAGAR LIS,	NAGARKURNOOL	4A	220	11	3	0	410280.3	241994	424323.3	227951
45	NGK918	EXECUTIVE ENGINEER.	NAGARKURNOOL	4A	187500	220	22	281827993	5382859064	2705996929	3182733699	4906122294
46	NLG1082	SHATHINAGAR LIFT IRRIGATION SCHEME	NALGONDA	4A	180	11	1	493904	8832106.02	4441253	10726310.02	2547049
47	NLG1083	DAMARCHARLA LIFT IRRIGATION	NALGONDA	4A	150	11	1	467194	9708439	4250331	11833498	2125272
48	NLG1110	NADIGADDA LIFT IRRIGATION SCHEME	NALGONDA	4A	161	11	1	376977	7818804	3406581	9358825	1866560
49	NLG1145	DATHATREYA LIFT IRRIGATION SCHEME	NALGONDA	4A	167	11	1	167043	6362905	1858002	8125793	95114
50	NLG1156	GANDHI NAGAR LIFT IRRIGATION SCHEME	NALGONDA	4A	523	11	1	618164	7721272	5014625	9520676	3215221
51	NLG1160	M/s The President L16 LI Scheme	NALGONDA	4A	310	11	1	224711	1844618	1948784	2141019	1652383
52	NLG1181	CEO Zillaparishad, Nalgonada	NALGONDA	4A	135	11	1	33008	3536219.01	840037	0	4376256.01
53	NLG1198	THE EXECUTIVE ENGINEER AMRSLBC PROJECT	NALGONDA	4A	15000	132	1	10514250	204143524	99169548.02	119402296.4	183910775.7
54	NLG120	EXECUTIVEENGINEER/APSIDC	NALGONDA	4A	235	11	1	0	-150274.57	225514	0	75239.43
55	NLG121	RAMALINGESWARA LICS 2	NALGONDA	4A	315	11	1	576687	3236898.04	4356166.02	4046408.04	3546656.02
56	NLG122	DY.EXECUTIVE ENGINEER	NALGONDA	4A	540	11	1	723714	5485974.39	5747455	6286852.39	4946577
57	NLG1229	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	119214	518725	969979	628140	860564
58	NLG1230	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	102644	924895.01	904414	1065795.01	763514
59	NLG1231	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	300	11	1	72	381143	317719	402707	296155
60	NLG1232	APSIDCLI SCHEME	NALGONDA	4A	150	11	1	126092	775514	1060581	952256	883839
61	NLG1233	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	0	196458	169786	207768	158476
62	NLG1234	Exe.Engineer/APSIDC SRI AALETAMMA LIFT IRRIGATION SCHEME	NALGONDA	4A	250	11	1	47586	1870822	838379	2224658	484543
63	NLG1237	PRESIDENT OF LI SCHEME	NALGONDA	4A	250	11	1	179689	4825376	1716237	5324561	1217052

64	NLG1256	THE EXECUTIVE ENGINEER RWS & S, DIVISION-1 NALGONDA	NALGONDA	4A	350	11	1	277337	2045372	2405865	4050998	400239
65	NLG1268	PRESIDENT HANUMAN LIFT IRRIGATION	NALGONDA	4A	92	11	2	123432	1062253	1004592	1190330	876515
66	NLG1286	Paradevi Lift Irrigation Scheme	NALGONDA	4A	450	11	1	55316	1278804	1199874	0	2478678
67	NLG1291	SRI KRISHNAVENI LIFT IRRIGATION FARMERS SOCIETY	NALGONDA	4A	673	11	1	308184	0	2734440	0	2734440
68	NLG165	ADARSHA COMPREHENSIVE LICS	NALGONDA	4A	774.5	11	1	359996	3342086.66	3263439	3745331.66	2860194
69	NLG166	JAIKISAN COMPRAHENSIVE LICS	NALGONDA	4A	820	11	1	1233561	9170565	9631583.02	10870293	7931855.02
70	NLG167	VEMANA COMPRAHENSIVE LICS	NALGONDA	4A	273.5	11	1	893184	6491666.51	7751641	7631116.51	6612191
71	NLG168	JAIKISAN LICS NO.2	NALGONDA	4A	550	11	99	0	-243050.73	0	0	-243050.73
72	NLG178	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	300	11	1	515991	3669833.02	5532480.01	4294495.02	4907818.01
73	NLG179	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	85	11	1	95136	408552.38	780112	504064.38	684600
74	NLG188	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	260	11	1	647874	4888685.58	5538540	5847352.58	4579873
75	NLG189	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	95	11	99	0	-100619.57	0	0	-100619.57
76	NLG190	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	270	11	1	391184	5406871.64	3518398	6389768.64	2535501
77	NLG191	TIRUMALASRINIVASA LICS STAGE	NALGONDA	4A	170	11	99	0	-168682.2	0	0	-168682.2
78	NLG192	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	210	11	1	427819	4355931.5	3671378.02	5028876.5	2998433.02
79	NLG214	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	210	11	1	237443	1031068.49	1820027	1276922.49	1574173
80	NLG215	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	150	11	1	360311	3069376.02	3202927.01	3611057.02	2661246.01
81	NLG216	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	170	11	1	455784	2887330.04	3744028	3211793.64	3419564.4
82	NLG217	DY EE APSIDC L 1 SCHEME	NALGONDA	4A	245	11	1	342608	2504716.68	2733657	2881736.68	2356637
83	NLG218	EEAPSIDCMIRYALAGUDA	NALGONDA	4A	185	11	99	0	-176153.82	0	0	-176153.82
84	NLG219	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	91	11	99	0	-396070.47	0	0	-396070.47
85	NLG236	EXECUTIVEENGINEER/APSIDC	NALGONDA	4A	185	11	1	38642	517925.64	503974	604966.64	416933
86	NLG248	EE/APSIDC/NAGARJUNASAGAR	NALGONDA	4A	245	11	99	0	-22927.46	0	0	-22927.46
87	NLG261	EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	108841	-239291375.3	241003977	901899.71	810702
88	NLG270	DY EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	283969	2738767.34	2311155	3080645.34	1969277
89	NLG271	DY EXECUTIVE ENGINEER	NALGONDA	4A	230	11	99	0	-361957.45	0	0	-361957.45
90	NLG285	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	365	11	1	255933	2082168.81	2276438	2411954.81	1946652
91	NLG286	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	360	11	99	0	-698605.59	0	0	-698605.59
92	NLG296	DEPUTY EXECUTIVE ENGINEER	NALGONDA	4A	225	11	1	324707	2434484.08	2537435	2830760.08	2141159
93	NLG309	EXECUTIVE ENGINEER	NALGONDA	4A	1310	11	1	1576000	12617508.69	12829723	7722694.08	17724537.61
94	NLG313	EXECUTIVE ENGINEER	NALGONDA	4A	115	11	99	0	-446215.01	0	0	-446215.01
95	NLG317	EXECUTIVE ENGINEER	NALGONDA	4A	155	11	99	0	1332276.56	0	1332276.56	0
96	NLG377	THE EXECUTIVE ENGINEER	NALGONDA	4A	160	11	99	0	-35482.2	0	0	-35482.2
97	NLG413	THE EXECUTIVE ENGINEER	NALGONDA	4A	100000	220	1	379684466	5773442775	3201105653	3356955962	5617592466
98	NLG432	THE PRESIDENT,BRUNDAVANPUR,	NALGONDA	4A	175	11	1	126288	-750591.11	1054084	0	303492.89
99	NLG455	THE PRESIDENT, LI SCHEME,	NALGONDA	4A	935	33	1	84600	6222136.61	1818322	7313846.61	726612
100	NLG523	HTE EXECUTIVE ENGINEER.	NALGONDA	4A	500	11	99	0	1976124	0	1976124	0

101	NLG562	THE EXECUTIVE ENGINEER.	NALGONDA	4A	190	11	1	185616	3173033.28	10794090	13045972.28	921151
102	NLG887	M/S. VIVEKANANDA LIFT IRRIGATI	NALGONDA	4A	450	11	1	398948	9063528.5	3653608	10383808.5	2333328
103	SDP2220	LIFT IRRIGATION NANGNOOR	SIDDIPET	4A	110	11	1	20000	1283828	313018	1304407	292439
104	SDP2221	SRI MAHADEVA SWAMY LIFT IRRIGATION	SIDDIPET	4A	110	11	1	49521	1191026	499790	1210466	480350
105	SDP2278	EXECUTIVE ENGINEER, I.B DIVISION SIDDIPET 1	SIDDIPET	4A	1000	11	1	0	7321174	1244800	7429999	1135975
106	SDP2279	EXECUTIVE ENGINEER, I.B DIVISION SIDDIPET 2	SIDDIPET	4A	1000	11	1	0	8393028	1297164	8511908	1178284
107	SDP2553	EXECUTIVE ENGINEER RWS&S	SIDDIPET	4A	90	11	1	93538	1966795.29	1310906	3156496.29	121205
108	SDP2589	EXECUTIVE ENGINEER	SIDDIPET	4A	135000	400	22	218260000	193638718	2076475823	241143211	2028971330
109	SDP2608	EXE ENG KALESHWARAM PROJECT CONT DIV.NO-1	SIDDIPET	4A	174000	400	22	41733000	0	611692136	0	611692136
110	SDP2614	EXECUTIVE ENGINEER KPC DIVISION NO 02 GAJWEL	SIDDIPET	4A	104000	220	22	49089000	0	471141734	0	471141734
111	SDP2615	EE KPC DIVI	SIDDIPET	4A	83000	220	22	41396000	0	348657770	0	348657770
112	SGR1355	M/S. SRI RAMA MUTUAL AIDED	SANGAREDDY	4A	200	11	1	357907	2310772.17	2540235	2348181.17	2502826
113	SGR1356	THE PRESIDENT,GANGARAM LI	SANGAREDDY	4A	200	11	3	0	165649.03	220045	0	385694.03
114	SGR1531	THE EXCECUTIVE ENGINEER (I &	SANGAREDDY	4A	250	11	99	0	3121584.8	0	3121584.8	0
115	SGR1537	THE PRESIDENT. BORANCHA POCHAM	SANGAREDDY	4A	980	11	1	3792	4006822	1174404	4090587	1090639
116	SGR1556	THE EXECUTIVE ENGINEER	SANGAREDDY	4A	250	11	99	0	2868007.25	0	2868007	0.25
117	SGR1865	THE EXECUTIVE ENGINEER (I & CA	SANGAREDDY	4A	250	11	99	0	904937	0	904937	0
118	SGR2100	LIFT IRRIGATION SCHEME SINGOOR PROJECT	SANGAREDDY	4A	1600	33	1	0	14052158	2495759	7820983.19	8726933.81
119	SGR2306	PRESIDENT PI BOGULLAMPALLY LI MUTUAL AIDED CO-OP SOCIETY	SANGAREDDY	4A	750	11	1	439	5511981	962671	5603865	870787
120	SGR2310	Director Phase 2 Bogulampally LiFT IRRIGATION	SANGAREDDY	4A	250	11	1	5101	1533580	387538	1578511	342607
121	SGR576	CHAIRMAN OF LI SCHEME	SANGAREDDY	4A	340	11	99	0	-0.22	0	0	-0.22
122	SGR864	M/S. EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	180	11	99	0	186898.88	0	186898.88	0
123	SGR865	M/S. EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	150	11	99	0	-0.28	0	0	-0.28
124	SGR866	M/S.EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	210	11	99	0	0.07	0	0.03	0.04
125	SPT1014	M/S. MAHANKALIGUDEM LI SCHEME	SURYAPET	4A	150	11	99	0	297054.36	18010	315064.36	0
126	SPT1030	THE PRESIDENT. APSIDC LI SCHEM	SURYAPET	4A	1700	33	1	2445100	37549076	20739040	31400143.68	26887972.32
127	SPT1080	M/S. GANGA BHAVANI LIFT IRRIGATION SCHEME	SURYAPET	4A	106	11	1	137319	2337042.02	1121681	3058845.02	399878
128	SPT1140	PRESIDENT BENIFICINARY COMITEE APSIDC LI SEHEME	SURYAPET	4A	4800	33	1	259600	59143214	11503058	38837263.68	31809008.32

129	SPT1141	PRESIDENT BENIFICINARY COMITEE APSIDC LI SCHEME	SURYAPET	4A	2000	33	1	143600	18060512	9212453	17369199.08	9903765.92
130	SPT1161	AMARAVARAM L.I.SCHEME	SURYAPET	4A	3600	33	1	20900	48131260	7462473	30235061.14	25358671.86
131	SPT1195	PONUGODU LIFT IRRIGATION SCHEME	SURYAPET	4A	210	11	1	146868	1899936	1262505	2661326	501115
132	SPT1196	MATTAMPALLY LIFT IRRIGATION SCHEME	SURYAPET	4A	105	11	1	72968	693903	623388.01	1090948	226343.01
133	SPT1224	SUNYAPAHAD LIFT IRRIGATION SCHEME	SURYAPET	4A	350	11	1	580461	8532719	6677061.68	10675559	4534221.68
134	SPT1226	DEPUTY ENGINEER (APSIDC)	SURYAPET	4A	100	11	1	135697	1115774.03	1070054	1760400.03	425428
135	SPT1227	APSIDCL (34 lift)	SURYAPET	4A	95	11	1	152251	1242341.01	1298197	2067420.01	473118
136	SPT1229	APSIDC LI SCHEME YG THANDA	SURYAPET	4A	5000	33	1	4204000	40797847	78191081	76795500.33	42193427.67
137	SPT169	ASSISTANT ENGINEER	SURYAPET	4A	460	11	1	1165722	8206736.3	8784469	9624412.3	7366793
138	SPT195	MAHATMA GANDHI LICS	SURYAPET	4A	170	11	99	0	187672.57	163248	325560.57	25360
139	SPT196	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	110	11	1	530740	5494828.81	5478528	6459703.81	4513653
140	SPT197	THE EXECUTIVE ENGINEER	SURYAPET	4A	185	11	99	0	-144426.13	155064	0	10637.87
141	SPT198	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	456	11	1	480946	3149947.1	3948263	3761808.1	3336402
142	SPT199	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	250.8	11	1	306223	1184303.13	2386545	2300163.13	1270685
143	SPT200	ASST ENGR APSIDC	SURYAPET	4A	130	11	1	316056	2569598.79	2848071	3169398.79	2248271
144	SPT201	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	85	11	1	105226	854102.03	858368	1270042.03	442428
145	SPT202	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	450	11	1	920971	7715199.99	7569590.01	8830854.99	6453935.01
146	SPT203	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	319.2	11	99	0	-241510.14	252438	0	10927.86
147	SPT204	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	381.9	11	1	758201	6386034.54	6185446	7241835.54	5329645
148	SPT205	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	176.7	11	99	0	-50034.37	63057	0	13022.63
149	SPT207	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	2483	11	1	3229400	58471976.46	31413244	35080872.69	54804347.77
150	SPT211	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	760	11	1	787291	6731756.39	6313406.01	7680544.39	5364618.01
151	SPT287	DY EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	305	11	1	955162	6615016.27	7658698	7896709.27	6377005
152	SPT299	DEPUTY EXECUTIVE ENGINEER	SURYAPET	4A	505	11	1	911090	5979490.55	6902146	6990457.55	5891179
153	SPT300	DEPUTY EXECUTIVE ENGINEER	SURYAPET	4A	965	11	1	1505360	12463031.59	11970104	14274519.59	10158616
154	SPT316	EXECUTIVE ENGINEER	SURYAPET	4A	165	11	99	0	-10715.13	0	0	-10715.13
155	SPT328	DY EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	145	11	99	0	-92021.69	95845	0	3823.31
156	SPT390	PRESIDENT	SURYAPET	4A	1400	11	1	417200	11278890.17	9237512	7151920.06	13364482.11
157	SPT461	THE PRESIDENT	SURYAPET	4A	85	11	1	145426	2671781.25	1221557	3425239.25	468099
158	SPT481	THE PRESIDENT	SURYAPET	4A	200	11	1	6671	365960.53	245328	555449.53	55839
159	SPT482	THE PRESIDENT	SURYAPET	4A	235	11	1	3139	303998.48	287035	526738.48	64295
160	SPT483	THE PRESIDENT	SURYAPET	4A	130	11	1	3131	-1028536.67	1066008	0	37471.33
161	SPT642	M/S. RAI THU RAKSHA L.I. SCHEME	SURYAPET	4A	140	11	1	5645	-1685925.86	1733948	0	48022.14
162	SPT643	M/S. UTHAM PADMAVATHI LIFT IRR	SURYAPET	4A	1790	11	1	0	2356793.41	1513325	1661183.67	2208934.74
163	SPT747	M/S. KODANDA RAMASWAMY LIFT IR	SURYAPET	4A	228	11	1	211584	-973747.64	1716070	0	742322.36
164	SPT784	M/S. TADVAI LIFT IRRIGATION SC	SURYAPET	4A	210	11	1	127317	1946427.18	1167350	2478948.18	634829
165	SPT816	M/S. SEETHARAMANJANEYA LI SCHE	SURYAPET	4A	785	11	1	884753	6886188.52	7027859.02	7901301.52	6012746.02

166	SPT820	M/S. UTTAM KUMAR REDDY LIFT IR	SURYAPET	4A	2395	33	1	3518250	59826474.6	30741549	49977222.89	40590800.71
167	SPT826	THE PRESIDENT BENEFICIARIES CO	SURYAPET	4A	1760	33	1	98400	9512255.45	3240679	6775068.99	5977865.46
168	SPT834	M/S. KARSHAKAMITRA LI SCHEME.	SURYAPET	4A	88	11	1	106502	2467272.45	988513	3094183.45	361602
169	SPT870	THE PRESIDENT MANCHYA THANDA L	SURYAPET	4A	400	11	1	771032	12690391.94	6049434	16412124.94	2327701
170	VKB2068	EXECUTIVE ENGINEER RWS	VIKARABAD	4A	450	11	1	1780942	13475953	14324535	25079451	2721037
171	VKB410	EXECUTIVE ENGINEER PWD	VIKARABAD	4A	155.5	11	3	36	160359.29	169241	169274.29	160326
172	VKB413	DEPUTY EXECUTIVE ENGINEER	VIKARABAD	4A	120	11	3	0	244955.82	140935	253673.32	132217.5
173	WNP1107	EXECUTIVE ENGINEER.	WANAPARTHY	4A	100	11	3	0	210754	123944	218380	116318
174	WNP1238	EXCUTIVE ENGINEER	WANAPARTHY	4A	167500	132	22	234992000	6041594753	2412066647	3556001548	4897659852
175	WNP1285	CHIEF EXCUTIVE OFFICER	WANAPARTHY	4A	850	11	1	3868120	43594366	28492901	45997777	26089490
176	WNP1286	CHIEF EXCUTIVE OFFICER	WANAPARTHY	4A	447	11	1	1271211	15287368	9504799	16098829	8693338
177	WNP488	DEPUTY EXECUTIVE ENGINEER	WANAPARTHY	4A	225	11	3	0	397205.36	245641	411270.36	231576
178	WNP517	EXECUTIVE ENGINEER	WANAPARTHY	4A	3220	33	1	553400	11819019.13	7858472.59	6942586.73	12734904.99
179	WNP548	SRI KURUMURTHYRARAYA LIFT IRRI	WANAPARTHY	4A	1220	11	1	2572385	39792641.24	21950234	23358870.51	38384004.73
180	WNP549	AMARACHINTHA L.I.SCHEME BENEFI	WANAPARTHY	4A	1620	33	1	1834800	49702226.09	18656841	28368467.63	39990599.46
181	WNP563	SRI KURUMURTHYRAYA	WANAPARTHY	4A	310	11	1	768170	9242163.39	5781094	10050871.39	4972386
182	WNP598	THE PRESIDENT GKRR SANGAM	WANAPARTHY	4A	120	11	3	0	279176.78	145922	288319.78	136779
183	WNP600	PRESIDENT MAHABUPAL SAMUDRAM,	WANAPARTHY	4A	120	11	3	0	583473.52	168226	596899.52	154800
184	WNP605	K.HANUMANTH REDDY	WANAPARTHY	4A	1210	33	1	912000	23191952.61	9570085	13473745.45	19288292.16
185	WNP613	KRISHNA REDDY, PRESIDENT	WANAPARTHY	4A	200	11	3	48632	1748433.03	694416	2004354.03	438495
186	WNP665	G.BHASKAR REDDY (PRESIDENT).	WANAPARTHY	4A	208	11	3	0	420901.87	232001	434655.87	218247
187	WNP666	G.BHASKAR REDDY (PRESIDENT)	WANAPARTHY	4A	970	33	3	0	1102032.61	835640	1149686.61	787986
188	WNP684	R.HANUMAIAH	WANAPARTHY	4A	245	11	3	0	472776.71	266121	488381.71	250516
189	WNP744	A.SHIVANARAYA,S/O.BUCHANNA.	WANAPARTHY	4A	1850	33	1	840100	65477567.08	14050278	36616206.41	42911638.67
190	WNP752	THE PRESIDENT	WANAPARTHY	4A	2200	33	3	238130	7037744.47	4200191	3947613.25	7290322.22
191	WNP753	THE PRESIDENT	WANAPARTHY	4A	3000	33	3	0	10759333.62	3578788	6029279.02	8308842.6
192	WNP754	THE PRESIDENT	WANAPARTHY	4A	1800	33	1	225520	11281459.3	4280564	6597791.87	8964231.43
193	WNP848	M/S. RAJIV BHIMA LIFT IRRIGATI	WANAPARTHY	4A	37500	132	1	16072000	240340558.2	161705975	137311641.8	264734891.4
194	WNP849	M/S. RAJIV BHIMA LIFT IRRIGATI	WANAPARTHY	4A	12500	132	1	6174000	74320610.38	60571828	43168094.58	91724343.8
195	WNP885	THE PRESIDENT.	WANAPARTHY	4A	503	11	3	211664	6354840.61	2375270	7369499.61	1360611
196	WNP895	THE PRESIDENT.	WANAPARTHY	4A	840	11	3	372170	13225517.93	4193492	15226788.93	2192221
197	YDD1235	PRESIDENT SRI BHEEMALINGESHWRASWAMY LIFT IRRIGATION SOCIETY	YADADRI	4A	480	11	1	602371	4392454	4738601	5159724	3971331
198	YDD686	THE PRESIDENT.	YADADRI	4A	187	11	23	284431	4435573.06	2703209.01	6066226.06	1072556.01

**SOUTHERN POWER DISTRIBUTION COMPANY OF TS LIMITED**

**DCB Cumulative Report for 2021-22 Financial Year**

SL.No.	SCNO	NAME	CIR_NAME	CAT	CMD	VOLTAGE	RDG_STAT	SALES	OB	DEMAND	COLLECTION	CB
1	GDL1294	EXECUTIVE ENGINEER APSIDC ALAMPUR LIFT IRRIGATION	GADWAL	4A	1250	33	1	1677600	12528507.84	13874909.63	7817492.63	18585924.84
2	GDL1295	PRESIDENT KYATHUR LIFT IRRIGATIONS SCHEMEII	GADWAL	4A	2000	33	1	1683000	18586012.89	14965037.81	9536272.81	24014777.89
3	GDL1300	EXECUTIVE ENGINEER RDS DIVISION JOGULAMBA GADWAL	GADWAL	4A	23157.8	132	1	22053500	130145617.5	176213199.5	93986906.49	212371910.5
4	GDL1302	THE EXECUTIVE ENGINEER APSIDC UTKOOR	GADWAL	4A	600	11	1	338935	3030330.1	3220019.35	1309727.35	4940622.1
5	GDL489	DEPUTY EXECUTIVE ENGINEER	GADWAL	4A	180	11	1	114110	898849	1033200.61	636342.61	1295707
6	GDL501	EXECUTIVE ENGINEER/APSIDC	GADWAL	4A	225	11	99	0	0	0	0	0
7	GDL581	PRESIDENT	GADWAL	4A	405	11	1	438372	2961130	3565174.65	2079287.65	4447017
8	GDL614	P.VASA REDDY, PRESIDENT	GADWAL	4A	960	11	1	658444	5797795	5671671.55	3351524.55	8117942
9	GDL620	THE PRESIDENT	GADWAL	4A	120	11	1	301526	1846001	2601087.19	1438170.19	3008918
10	GDL621	THE PRESIDENT	GADWAL	4A	100	11	1	180988	985375	1416870.62	1024791.62	1377454
11	GDL971	THE EXECUTIVE ENGINEER.	GADWAL	4A	87500	220	22	43404000	1053801735	456080577.1	387840711.1	1122041601
12	GDL985	THE EXECUTIVE ENGINEER.	GADWAL	4A	68750	220	22	44982334	1066781160	476782512.7	398103243.7	1145460429
13	MBN1086	M/S. KOILSAGAR LIFT IRRIGATION	MAHABOBNAGAR	4A	18750	132	1	13239000	295296669	130057289.4	109693731.4	315660227
14	MBN1106	EXECUTIVE ENGINEER.	MAHABOBNAGAR	4A	18750	132	1	15480000	423055484	157691259.4	145836386.4	434910357
15	MBN1115	EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	13000	132	22	4953400	80322481	56331426.36	37678346.36	98975561
16	MBN324	KALLAHALLI VEERANJANEYA FARMER	MAHABOBNAGAR	4A	300	11	1	376802	2287806.46	3001910.18	1774862.17	3514854.47
17	MBN325	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	875	11	1	1488615	9644037.76	11395587.46	6341055.46	14698569.76
18	MBN328	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	750	11	1	755330	3670170.36	6005595.7	3120691.7	6555074.36
19	MBN395	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	625	11	99	0	69754.93	0	783776	-714021.07
20	MBN432	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	270	11	99	0	34439.16	0	13462	20977.16
21	MBN437	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	100	11	1	207010	1116427.81	1685672.51	924773.51	1877326.81
22	MBN487	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	180	11	1	198323	1439207.49	1624611.07	1035691.07	2028127.49
23	MBN558	KONDADODDI L.I.SCHEME BENEFICI	MAHABOBNAGAR	4A	440	11	99	0	441267.02	0	139544	301723.02
24	MBN624	SRI RAGHAVENDRA LIFT IRRIGATIO	MAHABOBNAGAR	4A	510	11	1	681852	5874937.11	5664563.14	3378348.14	8161152.11
25	MBN633	DY. EXECUTIVE ENGINEER,APSIDC	MAHABOBNAGAR	4A	300	11	1	398889	3175372.49	3316684.11	2191836.11	4300220.49
26	MBN635	DY. EXECUTIVE ENGINEER,APSIDC.	MAHABOBNAGAR	4A	600	11	1	505604	4374775.39	4462785.94	2760781.94	6076779.39
27	MBN636	DY.EXECUTIVE ENGINEER,APSIDC.	MAHABOBNAGAR	4A	510	11	1	594824	5094637	5088704.31	3043433.31	7139908
28	MBN650	DY.EXECUTIVE ENGINEER, APSIDC	MAHABOBNAGAR	4A	405	11	1	207656	1649881.9	1876672.21	1063234.21	2463319.9
29	MBN660	DY.EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	200	11	1	41243	462094.16	528449.23	470516.23	520027.16
30	MBN886	THE EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	37000	132	22	15298000	238254211.5	166298334.2	112786618.2	291765927.5



31	MDK1586	THE PRESIDENT.	MEDAK	4A	300	11	3	144200	3692613	2407711.51	1681135.51	4419189
32	MDK1879	THE PRESIDENT.	MEDAK	4A	150	11	1	164799	725276	1160221.25	596487.25	1289010
33	MDK1880	THE PRESIDENT.	MEDAK	4A	300	11	3	0	594765	287519.51	241535.51	640749
34	MDK1971	M/S.THE PRESIDENT	MEDAK	4A	80	11	1	106661	3260639	4833159.07	2523501.07	5570297
35	MDK2008	TOOPRAN LI SCHEME	MEDAK	4A	120	11	3	39975	559155	484346.07	301313.07	742188
36	MDK2019	THE PRESIDENT OF APSIDC LIFT IRRIGATION	MEDAK	4A	80	11	1	81183	269799	1893523.71	790395.71	1372927
37	MDK410	DY EXECUTIVE ENGINEER	MEDAK	4A	120	11	1	84374	551392	648969.04	362906.04	837455
38	MDK546	DY.EXECUTIVE ENGINEER	MEDAK	4A	300	11	99	0	324470	192794.67	577793.67	-60529
39	MDK557	EXECUTIVE ENGINEER	MEDAK	4A	180	11	99	0	207387.88	120909.61	337346.61	-9049.12
40	NGK1242	EXECUTIVE ENGINEER MGKLIS, DIVISION 2, NAGARKURNOOL	NAGARKURNOOL	4A	167500	220	22	279978000	3466296383	2882745577	1801330146	4547711814
41	NGK1298	SRI RAMA TERTHESWARA LIFT IRRIGATION	NAGARKURNOOL	4A	250	11	1	225978	1444928.77	1951107.73	1037469.73	2358566.77
42	NGK616	SRI RAMA LIFT IRRIGATION	NAGARKURNOOL	4A	600	11	3	0	554931	618013.33	774386.33	398558
43	NGK617	SRI RAMA LIFT IRRIGATION	NAGARKURNOOL	4A	85	11	3	0	98280	112615	90623	120272
44	NGK623	MADHAVA SWAMY NAGAR LIS,	NAGARKURNOOL	4A	220	11	3	0	227951	258402.96	155333.96	331020
45	NGK918	EXECUTIVE ENGINEER.	NAGARKURNOOL	4A	187500	220	22	387734658	4906122294	3936921064	2493695323	6349348035
46	NLG1082	SHATHINAGAR LIFT IRRIGATION SCHEME	NALGONDA	4A	180	11	1	537271	2547049	4478731.63	2227524.61	4798256.02
47	NLG1083	DAMARCHARLA LIFT IRRIGATION	NALGONDA	4A	150	11	1	529937	2125272	4429379.84	2115605.84	4439046
48	NLG1110	NADIGADDA LIFT IRRIGATION SCHEME	NALGONDA	4A	161	11	1	410204	1866560	3469216.48	1698290.48	3637486
49	NLG1145	DATHATREYA LIFT IRRIGATION SCHEME	NALGONDA	4A	167	11	1	171809	95114	1419846.83	568532.83	946428
50	NLG1156	GANDHI NAGAR LIFT IRRIGATION SCHEME	NALGONDA	4A	523	11	1	804325	3215221	6343070.81	3083082.81	6475209
51	NLG1160	M/s The President L16 LI Scheme	NALGONDA	4A	310	11	1	87530	1652383	1172999.26	787997.26	2037385
52	NLG1198	THE EXECUTIVE ENGINEER AMRSLBC PROJECT	NALGONDA	4A	15000	132	1	7572000	183910775.7	85502900.58	69978619.56	199435056.7
53	NLG120	EXECUTIVE ENGINEER/ APSIDC	NALGONDA	4A	235	11	99	0	65287.43	77454.29	143048.29	-306.57
54	NLG121	RAMALINGESWARA LICs 2	NALGONDA	4A	315	11	1	478383	3522922.02	4074316.1	2269754.09	5327484.03
55	NLG122	DY.EXECUTIVE ENGINEER	NALGONDA	4A	540	11	1	721527	4902305	11975451.81	5572296.81	11305460
56	NLG1229	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	76356	860564	763403.84	468983.84	1154984
57	NLG1230	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	86632	763514	875141.84	493551.84	1145104
58	NLG1231	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	300	11	1	1092	296155	350420.67	202078.67	444497
59	NLG1232	APSIDCLI SCHEME	NALGONDA	4A	150	11	1	155420	883839	1301325.84	679080.84	1506084
60	NLG1233	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	0	158476	183713.84	106358.84	235831
61	NLG1234	Exe.Engineer/APSIDC SRI AALETAMMA LIFT IRRIGATION SCHEME	NALGONDA	4A	250	11	1	75304	484543	807887.73	411389.73	881041
62	NLG1237	PRESIDENT OF LI SCHEME	NALGONDA	4A	250	11	1	210405	1217052	1783521.21	931648.21	2068925

63	NLG1268	PRESIDENT HANUMAN LIFT IRRIGATION	NALGONDA	4A	92	11	2	68418	876515	730917.42	458014.42	1149418
64	NLG1286	Paradevi Lift Irrigation Scheme	NALGONDA	4A	450	11	1	333620	2478678	3141871	1692193	3928356
65	NLG1291	SRI KRISHNAVENI LIFT IRRIGATION FARMERS SOCIETY	NALGONDA	4A	673	11	1	468105	2734440	4249425.97	2182120.97	4801745
66	NLG165	ADARSHA COMPREHENSIVE LICS	NALGONDA	4A	774.5	11	1	432488	2811602	3850527.43	2048372.43	4613757
67	NLG166	JAIKISAN COMPRAHENSIVE LICS	NALGONDA	4A	820	11	1	1529739	7878799.02	11967892.08	6298276.08	13548415.02
68	NLG167	VEMANA COMPRAHENSIVE LICS	NALGONDA	4A	273.5	11	1	865500	6545328	8156840.37	4446908.37	10255260
69	NLG168	JAIKISAN LICS NO.2	NALGONDA	4A	550	11	99	0	-280613.73	17379.12	17379.12	-280613.73
70	NLG178	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	300	11	4	1332121	4884288.01	11086845.93	5227726.93	10743407.01
71	NLG179	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	85	11	1	105316	673180	892215.1	477490.1	1087905
72	NLG188	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	260	11	1	836904	4532791	7349733.76	3730311.76	8152213
73	NLG189	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	95	11	99	0	-105045.57	4502.52	4502.52	-105045.57
74	NLG190	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	270	11	1	471328	2523317	3966741.39	2021251.39	4468807
75	NLG191	TIRUMALASRINIVASA LICS STAGE	NALGONDA	4A	170	11	99	0	-177130.2	5012.91	5012.91	-177130.2
76	NLG192	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	210	11	1	413742	2982318.02	3795606.21	2055014.19	4722910.04
77	NLG214	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	210	11	1	220336	1559472	1874814.2	1035141.2	2399145
78	NLG215	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	150	11	1	264138	2636234.01	2721020.73	1575013.73	3782241.01
79	NLG216	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	170	11	1	824708	3409565.4	6886739.08	3322375.08	6973929.4
80	NLG217	DY EE APSIDC L 1 SCHEME	NALGONDA	4A	245	11	1	328628	2353524	2768391.37	1531440.37	3590475
81	NLG218	EEAPSIDCMIRYALAGUDA	NALGONDA	4A	185	11	99	0	-184450.82	3491.01	3491.01	-184450.82
82	NLG219	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	91	11	99	0	-402906.47	8537.33	8537.33	-402906.47
83	NLG236	EXECUTIVEENGINEER/APSIDC	NALGONDA	4A	185	11	1	58980	414629	641800.94	329791.94	726638
84	NLG248	EE/APSIDC/NAGARJUNASAGAR	NALGONDA	4A	245	11	99	0	-24373.46	2065.68	2065.68	-24373.46
85	NLG261	EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	160729	805717	1405426.82	702143.82	1509000
86	NLG270	DY EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	270075	1955325	2243527.51	1255235.51	2943617
87	NLG271	DY EXECUTIVE ENGINEER	NALGONDA	4A	230	11	99	0	-362958.45	6659.71	6659.71	-362958.45
88	NLG285	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	365	11	1	135731	1942753	1561661.4	988631.4	2515783
89	NLG286	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	360	11	99	0	-713880.59	5957.1	5957.1	-713880.59
90	NLG296	DEPUTY EXECUTIVE ENGINEER	NALGONDA	4A	225	11	1	363478	2119995	2889002.83	1535131.82	3473866.01
91	NLG309	EXECUTIVE ENGINEER	NALGONDA	4A	1310	11	1	2129900	17613312.61	17404361.35	10193975.35	24823698.61
92	NLG313	EXECUTIVE ENGINEER	NALGONDA	4A	115	11	99	0	-455156.01	4957.65	4957.65	-455156.01
93	NLG317	EXECUTIVE ENGINEER	NALGONDA	4A	155	11	99	0	0	0	0	0
94	NLG377	THE EXECUTIVE ENGINEER	NALGONDA	4A	160	11	99	0	-46120.2	5893.61	5893.61	-46120.2
95	NLG413	THE EXECUTIVE ENGINEER	NALGONDA	4A	100000	220	1	370610733	5617592466	3228292068	2367165604	6478718930
96	NLG432	THE PRESIDENT, BRUNDAVANPUR,	NALGONDA	4A	175	11	1	20398	303492.89	378187.96	208243.96	473436.89
97	NLG455	THE PRESIDENT, LI SCHEME,	NALGONDA	4A	935	33	1	1	726612	946637.14	545687.14	1127562
98	NLG523	HTE EXECUTIVE ENGINEER.	NALGONDA	4A	500	11	99	0	0	0	0	0
99	NLG562	THE EXECUTIVE ENGINEER.	NALGONDA	4A	190	11	1	143143	908120	1330911.19	696809.19	1542222
100	NLG887	M/S. VIVEKANANDA LIFT IRRIGATI	NALGONDA	4A	450	11	1	298504	2333328	2789416.51	1541354.51	3581390

101	SDP2220	LIFT IRRIGATION NANGNOOR	SIDDIPET	4A	110	11	1	1819	292439	130203.48	297175.48	125467
102	SDP2221	SRI MAHADEVA SWAMY LIFT IRRIGATION	SIDDIPET	4A	110	11	1	0	480350	149768.48	485086.48	145032
103	SDP2278	EXECUTIVE ENGINEER, I.B DIVISION SIDDIPET 1	SIDDIPET	4A	1000	11	1	40	1135975	911957.9	1179033.9	868899
104	SDP2279	EXECUTIVE ENGINEER, I.B DIVISION SIDDIPET 2	SIDDIPET	4A	1000	11	1	0	1178284	911734.9	1221342.9	868676
105	SDP2589	EXECUTIVE ENGINEER	SIDDIPET	4A	135000	400	22	173980000	2028971330	1757509121	2033970469	1752509982
106	SDP2608	EXE ENG KALESHWARAM PROJECT CONT DIV.NO-1	SIDDIPET	4A	174000	400	22	135612000	611692136	1171009300	1171009300	611692136
107	SDP2614	EXECUTIVE ENGINEER KPC DIVISION NO 02 GAJWEL	SIDDIPET	4A	104000	220	22	18610000	471141734	296226667.8	449232646.8	318135755
108	SDP2615	EE KPC DIVI	SIDDIPET	4A	83000	220	22	16111000	348657770	239684184.8	282484320.8	305857634
109	SDP2675	DEPUTY EXECUTIVE ENGINEER	SIDDIPET	4A	75	11	1	136	0	12857	12857	0
110	SGR1355	M/S. SRI RAMA MUTUAL AIDED	SANGAREDDY	4A	200	11	1	193863	2502826	1820931.67	1211467.67	3112290
111	SGR1356	THE PRESIDENT,GANGARAM LI	SANGAREDDY	4A	200	11	1	0	385694.03	261187.67	185499.67	461382.03
112	SGR1531	THE EXCECUTIVE ENGINEER (I &	SANGAREDDY	4A	250	11	99	0	0	0	0	0
113	SGR1537	THE PRESIDENT. BORANCHA POCHAM	SANGAREDDY	4A	980	11	3	0	1090639	963863.59	628177.59	1426325
114	SGR1556	THE EXECUTIVE ENGINEER	SANGAREDDY	4A	250	11	99	0	0.25	0	0	0.25
115	SGR1865	THE EXECUTIVE ENGINEER (I & CA	SANGAREDDY	4A	250	11	99	0	0	0	0	0
116	SGR2100	LIFT IRRIGATION SCHEME SINGOOR PROJECT	SANGAREDDY	4A	1600	33	1	467600	8726933.81	5950299.25	4066510.25	10610722.81
117	SGR2306	PRESIDENT PI BOGULLAMPALLY LI MUTUAL AIDED CO-OP SOCIETY	SANGAREDDY	4A	750	11	1	17531	870787	815672.38	522722.38	1163737
118	SGR2310	Director Phase 2 Bogulampally LiFT IRRIGATION	SANGAREDDY	4A	250	11	1	17618	342607	391727	219750	514584
119	SGR2709	PRESIDENT TALELMA LIFT IRRIGATION CO OPERATIVE SOCEITY	SANGAREDDY	4A	2000	33	1	7450	0	295365	108994	186371
120	SGR576	CHAIRMAN OF LI SCHEME	SANGAREDDY	4A	340	11	99	0	-0.22	0	0	-0.22
121	SGR864	M/S. EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	180	11	99	0	0	0	0	0
122	SGR865	M/S. EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	150	11	99	0	-0.28	0	0	-0.28
123	SGR866	M/S.EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	210	11	99	0	0.04	0	0	0.04
124	SPT1014	M/S. MAHANKALIGUDEM LI SCHEME	SURYAPET	4A	150	11	99	0	0	0	0	0
125	SPT1030	THE PRESIDENT. APSIDC LI SCHEM	SURYAPET	4A	1700	33	1	2331800	26887972.32	20134096.13	13098241.13	33923827.32
126	SPT1080	M/S. GANGA BHAVANI LIFT IRRIGATION SCHEME	SURYAPET	4A	106	11	1	100062	399878	881055.84	421310.81	859623.03
127	SPT1140	PRESIDENT BENIFICINARY COMITEE APSIDC LI SEHEME	SURYAPET	4A	4800	33	1	1309200	31809008.32	17075573.74	13061029.74	35823552.32

128	SPT1141	PRESIDENT BENEFICIARY COMITEE APSIDC LI SCHEME	SURYAPET	4A	2000	33	1	202200	9903765.92	4612642.81	3809274.81	10707133.92
129	SPT1161	AMARAVARAM L.I.SCHEME	SURYAPET	4A	3600	33	1	4900	25358671.86	5612147.66	8179487.66	22791331.86
130	SPT1195	PONUGODU LIFT IRRIGATION SCHEME	SURYAPET	4A	210	11	1	158446	501115	1306218.37	603720.37	1203613
131	SPT1196	MATTAMPALLY LIFT IRRIGATION SCHEME	SURYAPET	4A	105	11	1	76710	226343.01	658983.18	299489.18	585837.01
132	SPT1224	SUNYAPAHAD LIFT IRRIGATION SCHEME	SURYAPET	4A	350	11	1	795761	4534221.68	6253056.62	3312163.62	7475114.68
133	SPT1226	DEPUTY ENGINEER (APSIDC)	SURYAPET	4A	100	11	1	120017	425428	948108.9	449497.89	924039.01
134	SPT1227	APSIDCL (34 lift)	SURYAPET	4A	95	11	1	125414	473118	1153296.6	537056.6	1089358
135	SPT1229	APSIDC LI SCHEME YG THANDA	SURYAPET	4A	5000	33	1	3749500	42193427.67	35499829.73	22109040.73	55584216.67
136	SPT169	ASSISTANT ENGINEER	SURYAPET	4A	460	11	1	1080650	7327732	8662845.05	4767274.05	11223303
137	SPT195	MAHATMA GANDHI LICS	SURYAPET	4A	170	11	99	0	25360	0	8020	17340
138	SPT196	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	110	11	1	586760	4496633	5915497.85	3154159.85	7257971
139	SPT197	THE EXECUTIVE ENGINEER	SURYAPET	4A	185	11	99	0	-0.13	0	0	-0.13
140	SPT198	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	456	11	1	460613	3326107	3966932.76	2183679.76	5109360
141	SPT199	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	250.8	11	1	394175	1264717	3057350.35	1421042.35	2901025
142	SPT200	ASST ENGR APSIDC	SURYAPET	4A	130	11	2	270322	2238214	2514478.88	1412688.88	3340004
143	SPT201	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	85	11	1	125069	391368	989557.28	458151.28	922774
144	SPT202	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	450	11	1	954820	6374195.01	7701990.39	4234688.39	9841497.01
145	SPT203	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	319.2	11	99	0	-0.14	0	0	-0.14
146	SPT204	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	381.9	11	1	836091	5312625	6597969.11	3588690.11	8321904
147	SPT205	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	176.7	11	99	0	-0.37	0	0	-0.37
148	SPT207	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	2483	11	1	4132500	54801814.77	36556670.16	24913774.16	66444710.77
149	SPT211	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	760	11	1	892092	5348718.01	7242271.26	3843040.26	8747949.01
150	SPT287	DY EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	305	11	1	881830	6353917	7074093.42	3978021.42	9449989
151	SPT299	DEPUTY EXECUTIVE ENGINEER	SURYAPET	4A	505	11	1	873346	5866311	7108064.48	3889160.48	9085215
152	SPT300	DEPUTY EXECUTIVE ENGINEER	SURYAPET	4A	965	11	1	1184285	10107016	10160216.56	5915064.56	14352168
153	SPT316	EXECUTIVE ENGINEER	SURYAPET	4A	165	11	99	0	-15195.13	15195	0	-0.13
154	SPT328	DY EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	145	11	99	0	-0.69	3810.99	3810.99	-0.69
155	SPT390	PRESIDENT	SURYAPET	4A	1400	11	1	1479000	13364482.11	12463347.96	7437664.96	18390165.11
156	SPT461	THE PRESIDENT	SURYAPET	4A	85	11	1	42672	468099	504315.5	288451.5	683963
157	SPT481	THE PRESIDENT	SURYAPET	4A	200	11	1	13605	55839	313491.07	131520.07	237810
158	SPT482	THE PRESIDENT	SURYAPET	4A	235	11	1	24518	64295	444025.66	183013.66	325307
159	SPT483	THE PRESIDENT	SURYAPET	4A	130	11	1	38034	37471.33	531411.38	212314.38	356568.33
160	SPT642	M/S. RAI THU RAKSHA L.I. SCHEME	SURYAPET	4A	140	11	1	2488	47090.14	180450.25	82601.25	144939.14
161	SPT643	M/S. UTHAM PADMAVATHI LIFT IRR	SURYAPET	4A	1790	11	1	0	2129059.74	1631634.44	1101907.44	2658786.74
162	SPT747	M/S. KODANDA RAMASWAMY LIFT IR	SURYAPET	4A	228	11	1	261036	742322.36	2032903.49	935150.49	1840075.36
163	SPT784	M/S. TADVAI LIFT IRRIGATION SC	SURYAPET	4A	210	11	1	91439	634829	940242.18	493049.18	1082022
164	SPT816	M/S. SEETHARAMANJANEYA LI SCHE	SURYAPET	4A	785	11	1	864004	6012746.02	7262201.93	3998066.93	9276881.02

165	SPT820	M/S. UTTAM KUMAR REDDY LIFT IR	SURYAPET	4A	2395	33	1	4923900	40590800.71	39399568.08	23219411.08	56770957.71
166	SPT826	THE PRESIDENT BENEFICIARIES CO	SURYAPET	4A	1760	33	1	232000	5977865.46	3885172	2685864	7177173.46
167	SPT834	M/S. KARSHAKAMITRA LI SCHEME.	SURYAPET	4A	88	11	1	87896	361602	756927.18	380063.18	738466
168	SPT870	THE PRESIDENT MANCHYA THANDA L	SURYAPET	4A	400	11	1	885816	2327701	6597583.56	3000122.56	5925162
169	VKB410	EXECUTIVE ENGINEER PWD	VIKARABAD	4A	155.5	11	3	0	160326	178258.66	146338.66	192246
170	VKB413	DEPUTY EXECUTIVE ENGINEER	VIKARABAD	4A	120	11	3	0	132217.5	138010.06	163273.06	106954.5
171	WNP1107	EXECUTIVE ENGINEER.	WANAPARTHY	4A	100	11	3	0	116318	128176.89	105300.89	139194
172	WNP1238	EXCUTIVE ENGINEER	WANAPARTHY	4A	167500	132	22	347524000	4897659852	3075214081	2157545823	5815328110
173	WNP1285	CHIEF EXCUTIVE OFFICER	WANAPARTHY	4A	850	11	1	4001910	26089490	30356340.06	16869283.06	39576547
174	WNP1286	CHIEF EXCUTIVE OFFICER	WANAPARTHY	4A	447	11	1	1224665	8693338	9437933.33	5363732.33	12767539
175	WNP488	DEPUTY EXECUTIVE ENGINEER	WANAPARTHY	4A	225	11	3	0	231576	263285.25	158087.25	336774
176	WNP517	EXECUTIVE ENGINEER	WANAPARTHY	4A	3220	33	1	611660	12734904.99	8790210.27	5934616.27	15590498.99
177	WNP548	SRI KURUMURTHYRARAYA LIFT IRRRI	WANAPARTHY	4A	1220	11	1	2173281	38384004.73	20934807.37	15841195.37	43477616.73
178	WNP549	AMARACHINTHA L.I.SCHEME BENEFI	WANAPARTHY	4A	1620	33	1	1931400	39990599.46	19646325.87	15694875.87	43942049.46
179	WNP563	SRI KURUMURTHYRAYA	WANAPARTHY	4A	310	11	1	648090	4972386	5229235.3	3257577.3	6944044
180	WNP598	THE PRESIDENT GKRR SANGAM	WANAPARTHY	4A	120	11	3	0	136779	149250.06	122143.06	163886
181	WNP600	PRESIDENT MAHABUPAL SAMUDRAM,	WANAPARTHY	4A	120	11	3	0	154800	151277.07	103140.07	202937
182	WNP605	K.HANUMANTH REDDY	WANAPARTHY	4A	1210	33	1	449500	19288292.16	6853218.53	6544172.53	19597338.16
183	WNP613	KRISHNA REDDY, PRESIDENT	WANAPARTHY	4A	200	11	3	94636	438495	947386.78	508436.78	877445
184	WNP665	G.BHASKAR REDDY (PRESIDENT).	WANAPARTHY	4A	208	11	3	0	218247	245164.39	147961.39	315450
185	WNP666	G.BHASKAR REDDY (PRESIDENT)	WANAPARTHY	4A	970	33	3	0	787986	1030038.74	626729.74	1191295
186	WNP684	R.HANUMAIAH	WANAPARTHY	4A	245	11	3	0	250516	284095.51	168973.51	365638
187	WNP744	A.SHIVANARAYA,S/O.BUCHANNA.	WANAPARTHY	4A	1850	33	1	1311150	42911638.67	16893058.06	15195340.06	44609356.67
188	WNP752	THE PRESIDENT	WANAPARTHY	4A	2200	33	3	0	7290322.22	3092264.78	2840678.78	7541908.22
189	WNP753	THE PRESIDENT	WANAPARTHY	4A	3000	33	3	0	8308842.6	3982345.66	3392994.66	8898193.6
190	WNP754	THE PRESIDENT	WANAPARTHY	4A	1800	33	3	150700	8964231.43	4066036.36	3478578.36	9551689.43
191	WNP848	M/S. RAJIV BHIMA LIFT IRRIGATI	WANAPARTHY	4A	37500	132	1	24132000	264734891.4	224195945.9	139950819.9	348980017.4
192	WNP849	M/S. RAJIV BHIMA LIFT IRRIGATI	WANAPARTHY	4A	12500	132	1	9042000	91724343.8	84565274.3	51139514.3	125150103.8
193	WNP885	THE PRESIDENT.	WANAPARTHY	4A	503	11	3	0	1360611	625358.08	709382.08	1276587
194	WNP895	THE PRESIDENT.	WANAPARTHY	4A	840	11	3	0	2192221	981837.81	917070.81	2256988
195	YDD1235	The Executive Engineer	YADADRI	4A	480	11	1	436739	3971331	4246786.27	2445131.27	5772986
196	YDD686	The Executive Engineer	YADADRI	4A	187	11	1	240312	1072556.01	1968984.6	974483.58	2067057.03

**SOUTHERN POWER DISTRIBUTION COMPANY OF TS LIMITED**

**DCB Cumulative Report for 2022-23 Financial Year**

SL.No.	SCNO	NAME	CIR_NAME	CAT	CMD	VOLTAGE	RDG_STAT	SALES	OB	DEMAND	COLLECTION	CB
2426	GDL1294	EXECUTIVE ENGINEER APSIDC ALAMPUR LIFT IRRIGATION	GADWAL	4A	1250	33	1	760800	18585924.84	9425806.78	782216	27229515.62
2427	GDL1295	PRESIDENT KYATHUR LIFT IRRIGATIONS SCHEMEII	GADWAL	4A	2000	33	1	516200	24014777.89	8720352.81	1025420	31709710.7
2432	GDL1300	EXECUTIVE ENGINEER RDS DIVISION JOGULAMBA GADWAL	GADWAL	4A	23157.8	132	1	4691900	212371910.5	86524258.38	9277450.5	289618718.4
2434	GDL1302	THE EXECUTIVE ENGINEER APSIDC UTKOOR	GADWAL	4A	600	11	1	146701	4940622.1	2349984	218174	7072432.1
2450	GDL489	DEPUTY EXECUTIVE ENGINEER	GADWAL	4A	180	11	1	50798	1295707	752566	58849	1989424
2451	GDL501	EXECUTIVE ENGINEER/APSIDC	GADWAL	4A	225	11	99	0	0	0	0	0
2454	GDL581	PRESIDENT	GADWAL	4A	405	11	1	234362	4447017	2695775.24	195064.24	6947728
2459	GDL614	P.VASA REDDY, PRESIDENT	GADWAL	4A	960	11	1	39957	8117942	2335046.78	361572	10091416.78
2460	GDL620	THE PRESIDENT	GADWAL	4A	120	11	1	136874	3008918	1756028.88	143250.88	4621696
2461	GDL621	THE PRESIDENT	GADWAL	4A	100	11	1	84172	1377454	960127.48	67290.48	2270291
2482	GDL971	THE EXECUTIVE ENGINEER.	GADWAL	4A	87500	220	22	22272000	1122041601	363686599.5	48055106	1437673095
2484	GDL985	THE EXECUTIVE ENGINEER.	GADWAL	4A	68750	220	22	26332999	1145460429	402004129	48183603	1499280955
4787	MBN1086	M/S. KOILSAGAR LIFT IRRIGATION	MAHABOBNAGAR	4A	18750	132	1	1332000	315660227	63748011	13269875	366138363
4796	MBN1106	EXECUTIVE ENGINEER.	MAHABOBNAGAR	4A	18750	132	1	4125000	434910357	93511245	17981925	510439677
4798	MBN1115	EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	13000	132	22	3472880	98975561	50387002.29	3964307.29	145398256
5024	MBN324	KALLAHALLI VEERANJANEYA FARMER	MAHABOBNAGAR	4A	300	11	1	256140	3514854.47	2598118.25	161997.25	5950975.47
5025	MBN325	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	875	11	1	869907	14698569.76	8618834.97	670720.97	22646683.76
5028	MBN328	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	750	11	1	495362	6555074.36	5098344	305988	11347430.36
5032	MBN395	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	625	11	99	0	-714021.07	0	0	-714021.07
5034	MBN432	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	270	11	99	0	20977.16	842	830	20989.16
5035	MBN437	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	100	11	1	133836	1877326.81	1348344.45	83919.45	3141751.81
5037	MBN487	DEPUTY EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	180	11	1	125916	2028127.49	1330545.39	93726.39	3264946.49
5055	MBN558	KONDADODDI L.I.SCHEME BENEFICI	MAHABOBNAGAR	4A	440	11	99	0	301723.02	12101	11922	301902.02
5072	MBN624	SRI RAGHAVENDRA LIFT IRRIGATIO	MAHABOBNAGAR	4A	510	11	1	337109	8161152.11	3863516.29	363645.29	11661023.11
5078	MBN633	DY. EXECUTIVE ENGINEER,APSIDC	MAHABOBNAGAR	4A	300	11	1	185483	4300220.49	2183570.07	192275.07	6291515.49
5079	MBN635	DY. EXECUTIVE ENGINEER,APSIDC.	MAHABOBNAGAR	4A	600	11	1	218394	6076779.39	2928848.16	266650.16	8738977.39
5080	MBN636	DY.EXECUTIVE ENGINEER,APSIDC.	MAHABOBNAGAR	4A	510	11	1	201958	7139908	2869638	321464	9688082
5088	MBN650	DY.EXECUTIVE ENGINEER, APSIDC	MAHABOBNAGAR	4A	405	11	1	102703	2463319.9	1442250.26	120830.26	3784739.9
5091	MBN660	DY.EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	200	11	1	12659	520027.16	415172.48	31031.48	904168.16
5173	MBN886	THE EXECUTIVE ENGINEER	MAHABOBNAGAR	4A	37000	132	22	12418000	291765927.5	160333018	13653840	438445105.5

7209	MDK1586	THE PRESIDENT.	MEDAK	4A	300	11	1	78272	4419189	4803962	193745	9029406
7256	MDK1879	THE PRESIDENT.	MEDAK	4A	150	11	1	29888	1289010	426924.51	60496.5	1655438.01
7257	MDK1880	THE PRESIDENT.	MEDAK	4A	300	11	3	0	640749	373614	44444	969919
7272	MDK1971	M/S.THE PRESIDENT	MEDAK	4A	80	11	1	1870	5570297	1737759	224185	7083871
7276	MDK2008	TOOPRAN LI SCHEME	MEDAK	4A	120	11	1	35901	742188	533078	33407	1241859
7283	MDK2019	THE PRESIDENT OF APSIDC LIFT IRRIGATION	MEDAK	4A	80	11	1	19119	1372927	406345	57650	1721622
7503	MDK410	DY EXECUTIVE ENGINEER	MEDAK	4A	120	11	1	29486	837455	379984	34995	1182444
7518	MDK546	DY.EXECUTIVE ENGINEER	MEDAK	4A	300	11	99	0	-60529	0	0	-60529
7519	MDK557	EXECUTIVE ENGINEER	MEDAK	4A	180	11	99	0	-9049.12	0	0	-9049.12
7570	NGK1242	EXECUTIVE ENGINEER MGKLIS,DIVISION2,NAGARKURNOOL	NAGARKURNOOL	4A	167500	220	22	54840000	4547711814	1151546027	645404184	5053853657
7592	NGK1298	SRI RAMA TERTHESWARA LIFT IRRIGATION	NAGARKURNOOL	4A	250	11	1	90082	2358566.77	1374780	3867038	-133691.23
7630	NGK616	SRI RAMA LIFT IRRIGATION	NAGARKURNOOL	4A	600	11	99	0	398558	3106628	3505186	0
7631	NGK617	SRI RAMA LIFT IRRIGATION	NAGARKURNOOL	4A	85	11	99	0	120272	520420.5	640692.5	0
7633	NGK623	MADHAVA SWAMY NAGAR LIS,	NAGARKURNOOL	4A	220	11	99	0	331020	1088820	1419840	0
7655	NGK918	EXECUTIVE ENGINEER.	NAGARKURNOOL	4A	187500	220	22	111835997	6349348035	1796553836	870874028	7275027843
7688	NLG1082	SHATHINAGAR LIFT IRRIGATION SCHEME	NALGONDA	4A	180	11	1	335523	4798256.02	5287900.09	2020693.09	8065463.02
7689	NLG1083	DAMARCHARLA LIFT IRRIGATION	NALGONDA	4A	150	11	1	324687	4439046	5036852.37	1863545.36	7612353.01
7698	NLG1110	NADIGADDA LIFT IRRIGATION SCHEME	NALGONDA	4A	161	11	1	156840	3637486	2920453.47	1092940.46	5464999.01
7717	NLG1145	DATHATREYA LIFT IRRIGATION SCHEME	NALGONDA	4A	167	11	1	56947	946428	1258668.38	588087.38	1617009
7725	NLG1156	GANDHI NAGAR LIFT IRRIGATION SCHEME	NALGONDA	4A	523	11	1	240108	6475209	5499411.44	2464100.44	9510520
7727	NLG1160	M/s The President L16 LI Scheme	NALGONDA	4A	310	11	1	128016	2037385	2186562.15	767002.15	3456945
7739	NLG1198	THE EXECUTIVE ENGINEER AMRSLBC PROJECT	NALGONDA	4A	15000	132	1	6974250	199435056.7	161538045.3	83986698.25	276986403.7
7740	NLG120	EXECUTIVEENGINEER/APSIDC	NALGONDA	4A	235	11	99	0	-306.57	4818.29	4818.29	-306.57
7745	NLG121	RAMALINGESWARA LICs 2	NALGONDA	4A	315	11	1	334713	5327484.03	4591477.47	1424113.47	8494848.03
7750	NLG122	DY.EXECUTIVE ENGINEER	NALGONDA	4A	540	11	1	393008	11305460	9416946.01	3725556	16996850.01
7758	NLG1229	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	60840	1154984	1106863.76	420525.76	1841322
7760	NLG1230	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	500	1145104	710315.21	420675.21	1434744
7761	NLG1231	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	300	11	1	0	444497	547905.37	164946.37	827456
7762	NLG1232	APSIDCLI SCHEME	NALGONDA	4A	150	11	1	92396	1506084	1491951.8	529370.8	2468665
7763	NLG1233	DY.E.E.\APSIDC\N.SAGAR	NALGONDA	4A	150	11	1	2	235831	288316.22	87240.22	436907
7764	NLG1234	Exe.Engineer/APSIDC SRI AALETAMMA LIFT IRRIGATION SCHEME	NALGONDA	4A	250	11	1	32848	881041	863590.16	270020.16	1474611
7767	NLG1237	PRESIDENT OF LI SCHEME	NALGONDA	4A	250	11	1	128351	2068925	2023961.95	654967.95	3437919

7798	NLG1268	PRESIDENT HANUMAN LIFT IRRIGATION	NALGONDA	4A	92	11	1	89978	1149418	1892122.2	343589.18	2697951.02
7816	NLG1286	Paradevi Lift Irrigation Scheme	NALGONDA	4A	450	11	1	234196	3928356	4189671.34	1461074.35	6656952.99
7821	NLG1291	SRI KRISHNAVENI LIFT IRRIGATION FARMERS SOCIETY	NALGONDA	4A	673	11	1	347736	4801745	5171116.95	1532139.95	8440722
7893	NLG165	ADARSHA COMPREHENSIVE LICS	NALGONDA	4A	774.5	11	1	125392	4613757	3279245.28	1125945.27	6767057.01
7894	NLG166	JAIKISAN COMPRAHENSIVE LICS	NALGONDA	4A	820	11	1	773022	13548415.02	12556339.92	5063788.92	21040966.02
7895	NLG167	VEMANA COMPRAHENSIVE LICS	NALGONDA	4A	273.5	11	1	543288	10255260	8481871.51	2483323.51	16253808
7896	NLG168	JAIKISAN LICS NO.2	NALGONDA	4A	550	11	99	0	-280613.73	17379.12	17379.12	-280613.73
7897	NLG178	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	300	11	1	196722	10743407.01	5084283.59	2229261.59	13598429.01
7898	NLG179	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	85	11	1	58548	1087905	899868.78	257771.78	1730002
7906	NLG188	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	260	11	1	379254	8152213	6202945.69	1936250.69	12418908
7907	NLG189	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	95	11	99	0	-105045.57	4502.52	4502.52	-105045.57
7908	NLG190	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	270	11	1	346058	4468807	4481795.58	1249574.58	7701028
7909	NLG191	TIRUMALASRINIVASA LICS STAGE	NALGONDA	4A	170	11	99	0	-177130.2	5012.91	5012.91	-177130.2
7910	NLG192	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	210	11	1	230267	4722910.04	3945219.87	1314314.84	7353815.07
7913	NLG214	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	210	11	1	147797	2399145	1563479.55	107445.54	3855179.01
7914	NLG215	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	150	11	1	202812	3782241.01	3283837.77	1026180.77	6039898.01
7915	NLG216	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	170	11	1	328788	6973929.4	5893624.54	2349002.54	10518551.4
7916	NLG217	DY EE APSIDC L 1 SCHEME	NALGONDA	4A	245	11	24	98908	3590475	2783154.84	1393648.84	4979981
7917	NLG218	EEAPSIDCMIRYALAGUDA	NALGONDA	4A	185	11	99	0	-184450.82	3491.01	3491.01	-184450.82
7918	NLG219	EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	91	11	99	0	-402906.47	8537.33	8537.33	-402906.47
7924	NLG236	EXECUTIVEENGINEER/APSIDC	NALGONDA	4A	185	11	1	31848	726638	689585.4	184098.4	1232125
7926	NLG248	EE/APSIDC/NAGARJUNASAGAR	NALGONDA	4A	245	11	99	0	-24373.46	2065.68	2065.68	-24373.46
7929	NLG261	EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	80673	1509000	1507784.72	527449.71	2489335.01
7930	NLG270	DY EXECUTIVE ENGINEER	NALGONDA	4A	230	11	1	112287	2943617	2102053.18	813596.18	4232074
7931	NLG271	DY EXECUTIVE ENGINEER	NALGONDA	4A	230	11	99	0	-362958.45	6659.71	6659.71	-362958.45
7936	NLG285	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	365	11	1	88992	2515783	1995446.47	732309.47	3778920
7937	NLG286	DY EXECUTIVE ENGINEER/APSIDC	NALGONDA	4A	360	11	99	0	-713880.59	5957.1	5957.1	-713880.59
7939	NLG296	DEPUTY EXECUTIVE ENGINEER	NALGONDA	4A	225	11	1	211256	3473866.01	3329161.17	1275806.17	5527221.01
7941	NLG309	EXECUTIVE ENGINEER	NALGONDA	4A	1310	11	1	850380	24823698.61	18966225.64	9273411.64	34516512.61
7942	NLG313	EXECUTIVE ENGINEER	NALGONDA	4A	115	11	99	0	-455156.01	4957.65	4957.65	-455156.01
7943	NLG317	EXECUTIVE ENGINEER	NALGONDA	4A	155	11	99	0	0	0	0	0
7960	NLG377	THE EXECUTIVE ENGINEER	NALGONDA	4A	160	11	99	0	-46120.2	5893.61	5893.61	-46120.2
7980	NLG413	THE EXECUTIVE ENGINEER	NALGONDA	4A	100000	220	1	239289999	6478718930	4256136479	2379515531	8355339878
7986	NLG432	THE PRESIDENT,BRUNDAVANPUR,	NALGONDA	4A	175	11	1	12564	473436.89	547549.42	220975.42	800010.89
7996	NLG455	THE PRESIDENT, LI SCHEME,	NALGONDA	4A	935	11	1	0	1127562	1732516.26	632112.26	2227966
8021	NLG523	HTE EXECUTIVE ENGINEER.	NALGONDA	4A	500	11	99	0	0	0	0	0
8037	NLG562	THE EXECUTIVE ENGINEER.	NALGONDA	4A	190	11	1	90412	1542222	1327299.41	326665.41	2542856
8153	NLG887	M/S. VIVEKANANDA LIFT IRRIGATI	NALGONDA	4A	450	11	23	136724	3581390	3341342.69	1562490.69	5360242



9779	SDP2220	LIFT IRRIGATION NANGNOOR	SIDDIPET	4A	110	11	1	0	125467	142635	9633	258469
9780	SDP2221	SRI MAHADEVA SWAMY LIFT IRRIGATION	SIDDIPET	4A	110	11	1	0	145032	143520	10406	278146
9803	SDP2278	EXECUTIVE ENGINEER, I.B DIVISION SIDDIPET 1	SIDDIPET	4A	1000	11	1	0	868899	1156062	76834	1948127
9804	SDP2279	EXECUTIVE ENGINEER, I.B DIVISION SIDDIPET 2	SIDDIPET	4A	1000	11	1	0	868676	1156060	76825	1947911
9908	SDP2589	EXECUTIVE ENGINEER	SIDDIPET	4A	135000	400	22	151280000	1752509982	1843021253	74182937	3521348298
9926	SDP2608	EXE ENG KALESHWARAM PROJECT CONT DIV.NO-1	SIDDIPET	4A	344000	400	1	113858000	611692136	1111889019	30825906	1692755249
9932	SDP2614	EXECUTIVE ENGINEER KPC DIVISION NO 02 GAJWEL	SIDDIPET	4A	104000	220	1	38613000	318135755	405684414	16548818	707271351
9933	SDP2615	EE KPC DIVI	SIDDIPET	4A	83000	220	22	33153000	305857634	350531172	15260410	641128396
9993	SDP2675	DEPUTY EXECUTIVE ENGINEER	SIDDIPET	4A	75	11	1	405	0	104559.84	1117.84	103442
10027	SDP2709	EXECUTIVE ENGINEER DIV NO.2 I-CADD	SIDDIPET	4A	34000	132	1	559000	0	35164471	0	35164471
10030	SDP2712	DY EXECUTIVE ENGINEER I & CADD	SIDDIPET	4A	110	11	1	15411	0	228727	0	228727
11254	SGR1355	M/S. SRI RAMA MUTUAL AIDED	SANGAREDDY	4A	200	11	1	914	3112290	652454	135729	3629015
11255	SGR1356	THE PRESIDENT,GANGARAM LI	SANGAREDDY	4A	200	11	1	0	461382.03	301784	30981	732185.03
11373	SGR1531	THE EXECUTIVE ENGINEER (I &	SANGAREDDY	4A	250	11	99	0	0	0	0	0
11376	SGR1537	THE PRESIDENT. BORANCHA POCHAM	SANGAREDDY	4A	980	11	1	43992	1426325	1647913	118835	2955403
11393	SGR1556	THE EXECUTIVE ENGINEER	SANGAREDDY	4A	250	11	99	0	0.25	0	0	0.25
11639	SGR1865	THE EXECUTIVE ENGINEER (I & CA	SANGAREDDY	4A	250	11	99	0	0	0	0	0
11796	SGR2100	LIFT IRRIGATION SCHEME SINGOOR PROJECT	SANGAREDDY	4A	1600	33	1	84800	10610722.81	3406175	473672	13543225.81
11856	SGR2306	PRESIDENT PI BOGULLAMPALLY LI MUTUAL AIDED CO-OP SOCIETY	SANGAREDDY	4A	750	11	1	0	1163737	895622.11	100342.11	1959017
11861	SGR2310	Director Phase 2 Bogulampally LiFT IRRIGATION	SANGAREDDY	4A	250	11	1	0	514584	341174	20333	835425
12241	SGR2709	PRESIDENT TALELMA LIFT IRRIGATION CO OPERATIVE SOCEITY	SANGAREDDY	4A	2000	33	1	953100	186371	8784337.21	32514.21	8938194
12446	SGR576	CHAIRMAN OF LI SCHEME	SANGAREDDY	4A	340	11	99	0	-0.22	0	0	-0.22
12666	SGR864	M/S. EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	180	11	99	0	0	0	0	0
12667	SGR865	M/S. EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	150	11	99	0	-0.28	0	0	-0.28
12668	SGR866	M/S.EXECUTIVE ENGINEER/APSIDC	SANGAREDDY	4A	210	11	99	0	0.04	0	0	0.04
12801	SPT1014	M/S. MAHANKALIGUDEM LI SCHEME	SURYAPET	4A	150	11	99	0	0	0	0	0
12810	SPT1030	THE PRESIDENT. APSIDC LI SCHEM	SURYAPET	4A	1700	33	1	1700300	33923827.32	17620599.99	1412716	50131711.31
12825	SPT1080	M/S. GANGA BHAVANI LIFT IRRIGATION SCHEME	SURYAPET	4A	106	11	1	80600	859623.03	809195.59	39079.58	1629739.04

12843	SPT1140	PRESIDENT BENEFICIARY COMITEE APSIDC LI SEHEME	SURYAPET	4A	4800	33	1	183000	35823552.32	10620208	1619532	44824228.32
12844	SPT1141	PRESIDENT BENEFICIARY COMITEE APSIDC LI SCHEME	SURYAPET	4A	2000	33	1	200	10707133.92	3532742.01	508082	13731793.93
12849	SPT1161	AMARAVARAM L.I.SCHEME	SURYAPET	4A	3600	33	1	0	22791331.86	6175219.84	913565.85	28052985.85
12853	SPT1195	PONUGODU LIFT IRRIGATION SCHEME	SURYAPET	4A	210	11	1	105983	1203613	1147223	56485	2294351
12854	SPT1196	MATTAMPALLY LIFT IRRIGATION SCHEME	SURYAPET	4A	105	11	1	45399	585837.01	528431.51	27611.5	1086657.02
12860	SPT1224	SUNYAPAHAD LIFT IRRIGATION SCHEME	SURYAPET	4A	350	11	1	399315	7475114.68	4222430.02	310247	11387297.7
12862	SPT1226	DEPUTY ENGINEER (APSIDC)	SURYAPET	4A	100	11	1	81955	924039.01	803640	40762	1686917.01
12863	SPT1227	APSIDCL (34 lift)	SURYAPET	4A	95	11	1	52553	1089358	699689.5	47082.5	1741965
12865	SPT1229	APSIDC LI SCHEME YG THANDA	SURYAPET	4A	5000	33	1	1103600	55584216.67	20938811.21	2408855.21	74114172.67
12951	SPT169	ASSISTANT ENGINEER	SURYAPET	4A	460	11	1	650576	11223303	6633246.5	446257.5	17410292
12959	SPT195	MAHATMA GANDHI LICs	SURYAPET	4A	170	11	99	0	17340	695	685	17350
12960	SPT196	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	110	11	1	291370	7257971	3830520.01	289137	10799354.01
12961	SPT197	THE EXECUTIVE ENGINEER	SURYAPET	4A	185	11	99	0	-0.13	0	0	-0.13
12962	SPT198	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	456	11	1	199166	5109360	2606585.74	208278.75	7507666.99
12963	SPT199	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	250.8	11	1	193820	2901025	2111005.81	118549.81	4893481
12964	SPT200	ASST ENGR APSIDC	SURYAPET	4A	130	11	2	161794	3340004	1880537.75	134420.75	5086121
12965	SPT201	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	85	11	1	58924	922774	648121	38536	1532359
12966	SPT202	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	450	11	1	493810	9841497.01	5870824.01	414989	15297332.02
12967	SPT203	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	319.2	11	99	0	-0.14	0	0	-0.14
12968	SPT204	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	381.9	11	1	499415	8321904	4996946.01	338726	12980124.01
12969	SPT205	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	176.7	11	99	0	-0.37	0	0	-0.37
12971	SPT207	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	2483	11	1	1929200	66444710.77	24560737.5	2659233.5	88346214.77
12975	SPT211	EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	760	11	1	428291	8747949.01	4948871	354659	13342161.01
12987	SPT287	DY EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	305	11	1	504651	9449989	5154345.25	380415.25	14223919
12989	SPT299	DEPUTY EXECUTIVE ENGINEER	SURYAPET	4A	505	11	1	504996	9085215	5321576.13	366016.13	14040775
12990	SPT300	DEPUTY EXECUTIVE ENGINEER	SURYAPET	4A	965	11	1	751270	14352168	8083867.25	604157.25	21831878
12994	SPT316	EXECUTIVE ENGINEER	SURYAPET	4A	165	11	99	0	-0.13	0	0	-0.13
12995	SPT328	DY EXECUTIVE ENGINEER/APSIDC	SURYAPET	4A	145	11	99	0	-0.69	3810.99	3810.99	-0.69
13016	SPT390	PRESIDENT	SURYAPET	4A	1400	11	1	1144200	18390165.11	11646372.04	732670.04	29303867.11
13033	SPT461	THE PRESIDENT	SURYAPET	4A	85	11	1	0	683963	220242.94	27296.94	876909
13035	SPT481	THE PRESIDENT	SURYAPET	4A	200	11	1	24533	237810	432511	10315	660006
13036	SPT482	THE PRESIDENT	SURYAPET	4A	235	11	1	38242	325307	640981.64	14377.63	951911.01
13037	SPT483	THE PRESIDENT	SURYAPET	4A	130	11	1	50815	356568.33	787467.72	19615.7	1124420.35
13071	SPT642	M/S. RAI THU RAKSHA L.I. SCHEME	SURYAPET	4A	140	11	1	3828	144939.14	218937	11677	352199.14
13072	SPT643	M/S. UTHAM PADMAVATHI LIFT IRR	SURYAPET	4A	1790	11	1	0	2658786.74	2155131	181134	4632783.74
13092	SPT747	M/S. KODANDA RAMASWAMY LIFT IR	SURYAPET	4A	228	11	1	110256	1840075.36	1282689.73	91169.73	3031595.36

13097	SPT784	M/S. TADVAI LIFT IRRIGATION SC	SURYAPET	4A	210	11	1	26919	1082022	590413.5	47217.5	1625218
13107	SPT816	M/S. SEETHARAMANJANEYA LI SCHE	SURYAPET	4A	785	11	2	912654	9276881.02	8376046.87	391588.88	17261339.01
13108	SPT820	M/S. UTTAM KUMAR REDDY LIFT IR	SURYAPET	4A	2395	33	1	1870000	56770957.71	22867566.49	2345035.5	77293488.7
13109	SPT826	THE PRESIDENT BENEFICIARIES CO	SURYAPET	4A	1760	33	1	35000	7177173.46	3182355	283599	10075929.46
13110	SPT834	M/S. KARSHAKAMITRA LI SCHEME.	SURYAPET	4A	88	11	1	38234	738466	479396	61055	1156807
13117	SPT870	THE PRESIDENT MANCHYA THANDA L	SURYAPET	4A	400	11	1	397112	5925162	4072776	251127	9746811
13960	VKB410	EXECUTIVE ENGINEER PWD	VIKARABAD	4A	155.5	11	3	0	192246	216625.77	14204.75	394667.02
13962	VKB413	DEPUTY EXECUTIVE ENGINEER	VIKARABAD	4A	120	11	3	0	106954.5	164161	9326	261789.5
13978	WNP1107	EXECUTIVE ENGINEER.	WANAPARTHY	4A	100	11	3	0	139194	149080.99	9750	278524.99
13990	WNP1238	EXCUTIVE ENGINEER	WANAPARTHY	4A	167500	132	22	61072000	5815328110	1320546537	625341959	6510532688
13994	WNP1285	CHIEF EXCUTIVE OFFICER	WANAPARTHY	4A	850	11	1	2582320	39576547	23881300	1596340	61861507
13995	WNP1286	CHIEF EXCUTIVE OFFICER	WANAPARTHY	4A	447	11	1	785380	12767539	7479394.5	521594.5	19725339
14034	WNP488	DEPUTY EXECUTIVE ENGINEER	WANAPARTHY	4A	225	11	3	0	336774	309708.5	22869.5	623613
14037	WNP517	EXECUTIVE ENGINEER	WANAPARTHY	4A	3220	33	1	132720	15590498.99	6747055.99	646099	21691455.98
14044	WNP548	SRI KURUMURTHYRARAYA LIFT IRRI	WANAPARTHY	4A	1220	11	1	1159843	43477616.73	14777182.43	1864730.43	56390068.73
14045	WNP549	AMARACHINTHA L.I.SCHEME BENEFI	WANAPARTHY	4A	1620	33	1	1206200	43942049.46	15461880.63	1850559.63	57553370.46
14047	WNP563	SRI KURUMURTHYRAYA	WANAPARTHY	4A	310	11	1	309610	6944044	3394426.96	313423.94	10025047.02
14049	WNP598	THE PRESIDENT GKRR SANGAM	WANAPARTHY	4A	120	11	3	0	163886	175215.99	11576	327525.99
14050	WNP600	PRESIDENT MAHABUPAL SAMUDRAM,	WANAPARTHY	4A	120	11	3	0	202937	177684.99	13119	367502.99
14051	WNP605	K.HANUMANTH REDDY	WANAPARTHY	4A	1210	33	1	224000	19597338.16	5382817.42	873079.42	24107076.16
14052	WNP613	KRISHNA REDDY, PRESIDENT	WANAPARTHY	4A	200	11	3	0	877445	363178	43171	1197452
14056	WNP665	G.BHASKAR REDDY (PRESIDENT).	WANAPARTHY	4A	208	11	3	0	315450	292929.94	21320.94	587059
14057	WNP666	G.BHASKAR REDDY (PRESIDENT)	WANAPARTHY	4A	970	33	3	0	1191295	1275528.05	163774.05	2303049
14061	WNP684	R.HANUMAIAH	WANAPARTHY	4A	245	11	3	0	365638	340924.57	26002.56	680560.01
14069	WNP744	A.SHIVANARAYA,S/O.BUCHANNA.	WANAPARTHY	4A	1850	33	1	155600	44609356.67	8876251.73	1943241.74	51542366.66
14071	WNP752	THE PRESIDENT	WANAPARTHY	4A	2200	33	3	0	7541908.22	3470495.79	536323.8	10476080.21
14072	WNP753	THE PRESIDENT	WANAPARTHY	4A	3000	33	3	0	8898193.6	4539228.85	674841.85	12762580.6
14073	WNP754	THE PRESIDENT	WANAPARTHY	4A	1800	33	1	348660	9551689.43	5678838.2	572408.2	14658119.43
14079	WNP848	M/S. RAJIV BHIMA LIFT IRRIGATI	WANAPARTHY	4A	37500	132	1	15442000	348980017.4	190743090	15383348	524339759.4
14080	WNP849	M/S. RAJIV BHIMA LIFT IRRIGATI	WANAPARTHY	4A	12500	132	1	5339000	125150103.8	67436101	5476432	187109772.8
14084	WNP885	THE PRESIDENT.	WANAPARTHY	4A	503	11	3	0	1276587	736666.5	72007.5	1941246
14085	WNP895	THE PRESIDENT.	WANAPARTHY	4A	840	11	3	0	2256988	1191048.88	154953.88	3293083
14207	YDD1235	The Executive Engineer	YADADRI	4A	480	11	1	229370	5772986	3082246.01	372563	8482669.01
14488	YDD686	The Executive Engineer	YADADRI	4A	187	11	1	167843	2067057.03	1683352.81	94802.81	3655607.03

## Annexure-V

Sl.No.	KGS#2 biennial Shutdown is tentatively planned during the month of March – April 2022 for 45 days.	Name of the Unit	From	To	No. Of Days	Remarks
1	RSTPS-I, II & III	<b>Unit-III</b>	01.10.2023	31.10.2023	31	
		<b>Unit-I</b>	15.02.2024	15.03.2024	30	
		<b>Unit-IV</b>	15.11.2023	24.12.2023	40	
		<b>Unit-VII</b>	08.01.2024	06.02.2024	30	
2	TALCHER-II	Unit-5	01.01.2023	30.01.2023	30	
		Unit-6	01.11.2022	30.11.2022	30	
		Unit-3	01.01.2023	12.07.2023	45	
		Unit-4	15.08.2023	13.09.2023	30	
3	Simhadri I&II	Unit-2	10.11.2022	14.12.2022	35	AOH PLAN
		Unit-3	15.06.2023	17.07.2023	30	
		Unit-1	10.11.2023	14.12.2023	35	
4	KUDGI	Unit-3	16.10.2022	14.12.2022	60	FOR BOILER AND TG O/H
		Unit-1	01.08.2023	04.09.2023	35	
		Unit-2	01.06.2023	30.07.2023	60	
5	NTECL Vallur	Unit-1	16.12.2022	24.01.2023	40	FOR BOILER AOH FGD WORKS
		Unit-2	06.09.2022	10.09.2022	5	
		Unit-3	01.07.2022	14.08.2022	45	
		Unit-1	20.12.2023	24.12.2023	5	BOILER LICENSEE RENEWAL
		Unit-2	15.07.2023	23.08.2023	40	BOILER OH, APH BASKETS REPLACEMENT, LPTOH
		Unit-3	24.07.2023	28.07.2023	5	BOILER LICENSEE RENEWAL
6	NTPL	Unit-2	14.06.2022	21.06.2022	7	BOILER LICENSEE RENEWAL
		Unit-1	01.11.2022	15.12.2022	45	Annual Maintenance
		Unit-1	19.07.2023	17.08.2023	30	Annual Maintenance & Boiler License Renewal
		Unit-2	15.06.2023	14.07.2023	30	

### Annexure-V

Sl.No.	KGS#2 biennial Shutdown is tentatively planned during the month of March – April 2022 for 45 days.	Name of the Unit	From	To	No. Of Days	Remarks	
7	MAPS	Unit-1	Unit is under project mode. Technical problems are being analysed at various levels. The likely date of starting will be communicated as and when clearance from regulators is obtained.				
8	KAIGA-I TO IV	KGS#2 biennial Shutdown is planned during the month of September-October -2022 for 40 days.					
		**KGS#3 biennial Shutdown is tentatively planned during the month of March – April 2023 for 40 days.					
		*** KGS#4 biennial Shutdown is tentatively planned during the month of November – December 2022 for 40 days.					
		* KGS#1 Shutdown is tentatively planned during the month of September to October-2023 for around 40 days' duration.					
		** KGS#3 biennial shutdown is tentatively planned during the month of March to April -2023for around 40 days' duration.					
9	NLC-I & II	Unit-3	07.10.2022	02.11.2022	27	Statutory Boiler Inspection, Furnace & Coil Cleaning, RS duct refractory rectification, RAPHs seal rectification and internal works, Mills & PF duct works, condenser jet cleaning, GT and UAT oil circulation	
		Unit-4	10.11.2022	06.12.2022	27		
		Unit-5	12.01.2023	21.01.2023	10	Statutory Boiler Inspection, Furnace & Coil Cleaning.	
		Unit-6	12.12.2022	07.01.2023	27	Statutory Boiler Inspection, Furnace & Coil Cleaning, RS duct refractory rectification, ABGs belt replacements, Mills & PF duct works, RAPHs seal rectification & internal works, chemical + jet cleaning, GT and UATs oil circulation.	
		Unit-I	02.09.2023	28.09.2023	27	Statutory Boiler Inspection, Boiler, Turbine short shutdown works	
		Unit-II	01.07.2023	27.07.2023	27		
		Unit-III	01.11.2023	27.11.2023	27		
		Unit-IV	02.10.2023	28.10.2023	27		
		Unit-V	01.08.2023	27.08.2023	27		
		Unit-VI	30.11.2023	13.01.2024	45	Statutory Boiler Inspection, Turbine MOH, Generatory MOH	
		Unit-VII	02.06.2023	28.06.2023	27	Statutory Boiler Inspection, Turbineshort shutdown works	
		Unit-1	08.10.2022	11.10.2022	4	Boiler Statutory License Renewal	
			25.11.2022	25.12.2022	31	Turbine Minor Overhaul and Annual Maintenance Works.	
		Unit-2	01.11.2022	25.11.2022	25	Annual Maintenance works and Boiler Statutory License Renewal	

### Annexure-V

Sl.No.	KGS#2 biennial Shutdown is tentatively planned during the month of March – April 2022 for 45 days.	Name of the Unit	From	To	No. Of Days	Remarks
10	NNTPP	Unit-1	07.10.2023	05.12.2023	60	UI FGD duct interconnection with existing system, Critical Maintenance works & Boiler statutory inspection
		Unit-2	12.12.2023	15.01.2024	35	Turbine Minor Overhaul, Critical Maintenance Works & Boiler Statutory Inspection.
11	NLC-I Expansion	Unit-1	20.11.2022	05.12.2022	16	Planned Outage
			10.10.2023	03.11.2023	25	Planned Outage
		Unit-2	12.09.2023	06.10.2023	25	Planned Outage
12	NLC-II Expansion	Unit-1	01.01.2023	30.01.2023	30	Annual Maintenance works in Boiler, Turbine and Generator. Refractory works in Cyclone, combustor and FBHE areas.
		Unit-2	15.11.2022	29.12.2022	45	Annual Maintenance works in Boiler, FBHE hanger modifications, refractory works in Cyclone cones, roofs and target walls, seal pots and partition walls in FBHEs. Annual maintenance of Turbine and Generator
		Unit-1	6/18/2023	7/17/2023	30	Annual Maintenance works in Boiler,refractory works in cyclone target walls, seal pots and partition walls in FBHEs. Boiler license renewal and vortex finder replacement. Annual maintenance of Turbine and Generator
			12/10/2023	1/8/2024	30	Annual Maintenance works in Boiler, Turbine and Generator
		Unit-2	5/1/2023	5/30/2023	30	Annual Maintenance works in Boiler,refractory works in cyclone target walls, seal pots and partition walls in FBHEs. Vortex finder replacement.
			11/1/2023	11/30/2023	30	Annual Maintenance works in Boiler, Turbine and Generator
13	KKNPP Unit-I		16.12.2023	28.02.2024	75	Refueling Shutdown
14	KKNPP Unit-II		01.04.2023	04.06.2023	65	Refueling Shutdown
			01.04.2024	04.06.2024	65	Refueling Shutdown

## Annexure-VI

<u>Annual Maintenance Schedule including R&amp;M for the year 2023-24</u>						
Sl.No	Station/Unit	Unit Capacity(MW)	From	To	Duration Days	Remarks
1	Priyadarshini Jurala -1	39	During the period of March -23 to June-23		15	Annual maintenance works will be carried out 15 days period on each unit .
	Priyadarshini Jurala -2	39			15	
	Priyadarshini Jurala -3	39			15	
	Priyadarshini Jurala -4	39			15	
	Priyadarshini Jurala -5	39			15	
	Priyadarshini Jurala -6	39			15	
2	LowerJurala -1	40	During the period of April -23 to May-23		8	Annual maintenance works will be carried out 8 days period on each unit.
	LowerJurala -2	40			8	
	LowerJurala -3	40			8	
	LowerJurala -4	40			8	
	LowerJurala -5	40			8	
	LowerJurala -6	40			8	
3	Srisailam LB -1	150	During the period of March-23 to June-23		15	Annual maintenance works will be carried out 15 days period on each unit.
	Srisailam LB -2	150			15	
	Srisailam LB -3	150			15	
	Srisailam LB -4	150			15	
	Srisailam LB -5	150			15	
	Srisailam LB -6	150			15	
4	Nagarjunasagar - 1	110	During the period of April -23 to		15	Annual maintenance works will be carried out 15
	Nagarjunasagar - 2	100.8			15	
	Nagarjunasagar - 3	100.8			15	
	Nagarjunasagar - 4	100.8			15	
	Nagarjunasagar - 5	100.8			15	

	Nagarjunasagar - 6	100.8	May-23	15	days period on each unit
	Nagarjunasagar -7	100.8		15	
	Nagarjunasagar - 8	100.8		15	
5	NSLCPH-1	30	During April'23 &	30	Maintenance works will be
	NSLCPH-2	30		30	
6	PCHES-1	30	During the period of April-23 to June-23	20	Annual maintenance works will be carried out 20
	PCHES-1	30		20	
	PCHES-1	30		20	
	PCHES-1	30		20	
7	Pochampad- 1	9	During the period of May-23 to July-23	15	Maintenance works will be carriedout during canal closure
	Pochampad- 2	9		15	
	Pochampad- 3	9		15	
	Pochampad- 4	9		15	



## Overhaul Schedules

### Actual & Tentative Overhaul Schedule for the FY 2022-23 & 2023-24

S.No	UNIT	CAPACITY (MW)	2022-23			2023-24		
			OVERHAUL DURATION	Days	AOH/ COH	OVERHAUL DURATION	Days	AOH/ COH
<b>KTPS-V &amp; VI</b>								
1	UNIT 9	250	25.06.2022 to 10.08.2022	47	AOH (Completed)	Not scheduled for overhaul during the year 2023-24 as AOH was carried out in the year 2022-23		
2	UNIT 10	250	Not scheduled for overhaul during the year 2022-23 as AOH was carried out in the year 2021-22			21-07-2023 to 03-09-2023	45	COH
3	UNIT 11	500	Not scheduled for overhaul during the year 2022-23 as COH was carried out in the year 2021-22			21-12-2023 to 09-01-2024	20	AOH
<b>KTPP</b>								
4	KTPP stage-I	500	25.05.2022 to 19.07.02022	56	AOH (Completed)	Not scheduled for overhaul during the year 2023-24 as AOH was carried out for the year 2022-23.		
5	KTPP stage-II	600	Not scheduled for overhaul during the year 2022-23 as AOH was carried out in the year 2021-22			01-06-2023 to 15-07-2023	45	COH
<b>RTS-B</b>								
6	RTS-B	62.5	15.11.2022 to 29.11.2022	15	AOH	15-11-2023 to 29-11-2023	15	AOH
<b>KTPS-VII Stage</b>								
7	KTPS-VII Stage	800	02-07-2022 to 25.09.2022	86	COH (Completed)	Not scheduled for overhaul during the year 2023-24 as COH was carried out in the FY 2022-23.		
<b>BTPS</b>								
8	Unit-1	270	01.11.2022 to 20.11.2022	20	AOH	Not scheduled for overhaul during the year 2023-24 as AOH was proposed in the year 2022-23.		
9	Unit-2	270	08.12.2022 to 27.12.2022	20	AOH			
10	Unit-3	270	Not scheduled for overhaul during the year 2023-24 as the units were commissioned in the year 2020-21 & 2021-22			16-07-2023 to 04-08-2023	20	AOH
11	Unit-4	270				09-01-2024 to 28.01-2024	20	AOH
<b>YTPS</b>								
12	Unit-1	800	Nil			Nil		
13	Unit-2	800	Nil			Nil		
14	Unit-3	800	Nil			Nil		
15	Unit-4	800	Nil			Nil		
16	Unit-5	800	Nil			Nil		

AOH-Annual Overhaul  
COH-Capital Overhaul

## Annexure-VII

### Availability projection data and unit outage plan for KGS-1 to 4 for financial year 2022-23 (second half) in million Units (mu)

		Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
1	<b>Unit-1</b> Gross Generation	139	134	139	139	125	139
2	<b>Unit-2</b> Gross Generation	*112	134	139	139	125	139
3	<b>Unit-3</b> Gross Generation	139	134	139	139	125	**80
4	<b>Unit-4</b> Gross Generation	139	***22	***71	139	125	139

Note:

\* KGS#2 biennial Shutdown is planned during the month of September-October -2022 for 40 days.

\*\*KGS#3 biennial Shutdown is tentatively planned during the month of March – April 2023 for 40 days.

\*\*\* KGS#4 biennial Shutdown is tentatively planned during the month of November – December 2022 for 40 days.

<b>Forecast details for KKNPP -1&amp;2 for the FY 2022-23</b>							
<b>ALL FIGURES IN MUs</b>							
<b>Unit#1</b>							
<b>Description/Month</b>	<b>Oct-22</b>	<b>Nov-22</b>	<b>Dec-22</b>	<b>Jan-23</b>	<b>Feb-23</b>	<b>Mar-23</b>	<b>Total</b>
<b>Generation</b>	744.00	720.00	744.00	744.00	672.00	744.00	<b>4368.00</b>
<b>Auxillary Consumption</b>	52.08	50.40	52.08	52.08	47.04	52.08	<b>305.76</b>
<b>Net Export</b>	691.92	669.60	691.92	691.92	624.96	691.92	<b>4062.24</b>
<b>Unit#2</b>							
<b>Description/Month</b>	<b>Oct-22</b>	<b>Nov-22</b>	<b>Dec-22</b>	<b>Jan-23</b>	<b>Feb-23</b>	<b>Mar-23</b>	<b>Total</b>
<b>Generation</b>	744.00	720.00	744.00	744.00	672.00	744.00	<b>4368.00</b>
<b>Auxillary Consumption</b>	52.08	50.40	52.08	52.08	47.04	52.08	<b>305.76</b>
<b>Net Export</b>	691.92	669.60	691.92	691.92	624.96	691.92	<b>4062.24</b>

**TPS-II Expansion (2x250 MW CFBC)  
Generation Plan (H2 FY 2022-23)**

**H2 FY 2022-23 (Oct-22 to Mar-23)**

S No.	Month	No. of days	Machine available days			Gross Generation (mu)			Export (mu)
			Unit-1	Unit-2	Total	Unit-1	Unit-2	Total	
1	Oct-22 *	31	17	24	41	84	108	192	168
2	Nov-22	30	30	14	30	101	47	148	130
3	Dec-22	31	31	2	34	104	7	111	97
	<b>Q3</b>	<b>92</b>	<b>78</b>	<b>40</b>	<b>105</b>	<b>289</b>	<b>162</b>	<b>451</b>	<b>395</b>
4	Jan-23	31	1	31	45	3	104	107	94
5	Feb-23	28	28	28	56	95	95	190	166
6	Mar-23	31	31	31	62	104	104	208	183
	<b>Q4</b>	<b>90</b>	<b>60</b>	<b>90</b>	<b>150</b>	<b>202</b>	<b>303</b>	<b>505</b>	<b>442</b>
<b>H2 FY 2022-23</b>		<b>182</b>	<b>138</b>	<b>130</b>	<b>255</b>	<b>491.2</b>	<b>465</b>	<b>956.2</b>	<b>837</b>

\* Actuals till 20-12-2022

**ANNUAL MAINTENANCE PLAN: H2 FY 2022-23**

Unit No.	Description of Work	Period of work		Duration
		From	To	
I	Annual Maintenance works in Boiler, Turbine and Generator. Refractory works in Cyclone, combustor and FBHE areas.	1/1/2023	1/30/2023	30
II	Annual maintenance works in boiler, FBHE hanger modifications, refractory works in Cyclone cones, roofs and target walls, seal pots and partition walls in FBHEs. Annual maintenance of Turbine and Generator.	11/15/2022	12/29/2022	45

**CENTRAL GENERATING STATIONS (CGS) / INTER STATE GENERATING STATIONS (ISGS) / IPPs**  
**POWER AVAILABILITY (NTPC /Kudgi) - For 2022-23**

Date: 26th June'22

Unit-wise Generation data in MW :

( FIGS IN MW)

		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
<b>1</b>	<b>Unit - 1</b>												
a	Installed capacity	800	800	800	800	800	800	800	800	800	800	800	800
b	Capacity under O & M	0	0	0	0	0	0	0	0	0	0	0	0
c	Capacity in Service (a-b)	800	800	800	800	800	800	800	800	800	800	800	800
d	Partial outage	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>
e	Gross Availability (c-d)	760	760	760	760	760	760	760	760	760	760	760	760
f	Local Loads												
g	Cons. in Aux.	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>
h	<b>Ex-bus (e-f-g)</b>	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5
<b>2</b>	<b>Unit - 2</b>												
a	Installed capacity	800	800	800	800	800	800	800	800	800	800	800	800
b	Capacity under O & M	0	0	0	0	0	0	0	0	0	0	0	0
c	Capacity in Service (a-b)	800	800	800	800	800	800	800	800	800	800	800	800
d	Partial outage	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>
e	Gross Availability (c-d)	760	760	760	760	760	760	760	760	760	760	760	760
f	Local Loads												
g	Cons. in Aux.	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>
h	<b>Ex-bus (e-f-g)</b>	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5
<b>3</b>	<b>Unit - 3</b>												
a	Installed capacity	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800	800	800	800	800
b	Capacity under O & M	0	0	0	0	0	0	413	800	373	0	0	0
c	Capacity in Service (a-b)	800	800	800	800	800	800	387	0	427	800	800	800
d	Partial outage	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>19</b>	<b>0</b>	<b>21</b>	<b>40</b>	<b>40</b>	<b>40</b>
e	Gross Availability (c-d)	760	760	760	760	760	760	368	0	406	760	760	760
f	Local Loads												
g	Cons. in Aux.	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>23.0</b>	<b>0.0</b>	<b>25.4</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>
h	<b>Ex-bus (e-f-g)</b>	712.5	712.5	712.5	712.5	712.5	712.5	344.7	0.0	380.3	712.5	712.5	712.5

**CENTRAL GENERATING STATIONS (CGS) / INTER STATE GENERATING STATIONS (ISGS) / IPPs  
ENERGY AVAILABILITY (NTPC / Kudgi)**

Unit-wise Generation data in MU :

*( FIGS IN MU )*

		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Total
<b>1</b>	<b>Unit - 1</b>													
a	Gross Generation	547	565	547	565	565	547	565	547	565	565	511	565	<b>6658</b>
b	Cons. in Aux	34	35	34	35	35	34	35	34	35	35	32	35	<b>416</b>
c	Supply to DAE Establishment / Local Loads													
d	<b>Ex-bus Generation (a-b-c)</b>	513	530	513	530	530	513	530	513	530	530	479	530	<b>6242</b>
<b>2</b>	<b>Unit - 2</b>													
a	Gross Generation	547	565	547	565	565	547	565	547	565	565	511	565	<b>6658</b>
b	Cons. in Aux	34	35	34	35	35	34	35	34	35	35	32	35	<b>416</b>
c	Supply to DAE Establishment / Local Loads													
d	<b>Ex-bus Generation (a-b-c)</b>	513	530	513	530	530	513	530	513	530	530	479	530	<b>6242</b>
<b>3</b>	<b>Unit - 3</b>													
a	Gross Generation	547	565	547	565	565	547	274	0	302	565	511	565	<b>5555</b>
b	Cons. in Aux	34	35	34	35	35	34	17	0	19	35	32	35	<b>347</b>
c	Supply to DAE Establishment / Local Loads													
d	<b>Ex-bus Generation (a-b-c)</b>	513	530	513	530	530	513	256	0	283	530	479	530	<b>5208</b>
<b>4</b>	<b>Total</b>													
a	Gross Generation	1642	1696	1642	1696	1696	1642	1404	1094	1433	1696	1532	1696	<b>18870</b>
b	Cons. in Aux	103	106	103	106	106	103	88	68	90	106	96	106	<b>1179</b>
c	Supply to DAE Establishment / Local Loads													
d	<b>Ex-bus Generation (a-b-c)</b>	1539	1590	1539	1590	1590	1539	1317	1026	1343	1590	1436	1590	<b>17691</b>

Note: Unit-3 Overhaul during 2022-23 is for 60 days (from 16-10-2022 to 14-12-2022, both dates inclusive) for Boiler and TG O/H.

**CENTRAL GENERATING STATIONS (CGS) / INTER STATE GENERATING STATIONS (ISGS) / IPPs**  
**POWER AVAILABILITY (NTPC /Kudgi) - For 2022-23**

Date: 26th June'22

Unit-wise Generation data in MW :

( FIGS IN MW)

		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
<b>1</b>	<b>Unit - 1</b>												
a	Installed capacity	500	500	500	500	500	500	500	500	500	500	500	500
b	Capacity under O & M	0	0	0	0	0	0	0	0	0	0	0	0
c	Capacity in Service (a-b)	500	500	500	500	500	500	500	500	500	500	500	500
d	Partial outage	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>
e	Gross Availability (c-d)	475	475	475	475	475	475	475	475	475	475	475	475
f	Local Loads												
g	Cons. in Aux.	<b>27.3</b>	<b>27.3</b>	<b>27.3</b>	<b>27.3</b>	<b>27.3</b>	<b>27.3</b>	<b>27.3</b>	<b>27.3</b>	<b>27.3</b>	<b>27.3</b>	<b>27.3</b>	<b>27.3</b>
h	<b>Ex-bus (e-f-g)</b>	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7
<b>2</b>	<b>Unit - 2</b>												
a	Installed capacity	800	800	800	800	800	800	800	800	800	800	800	800
b	Capacity under O & M	0	0	0	0	0	0	0	0	0	0	0	0
c	Capacity in Service (a-b)	800	800	800	800	800	800	800	800	800	800	800	800
d	Partial outage	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>
e	Gross Availability (c-d)	760	760	760	760	760	760	760	760	760	760	760	760
f	Local Loads												
g	Cons. in Aux.	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>
h	<b>Ex-bus (e-f-g)</b>	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5
<b>3</b>	<b>Unit - 3</b>												
a	Installed capacity	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800	800	800	800	800
b	Capacity under O & M	0	0	0	0	0	0	413	800	373	0	0	0
c	Capacity in Service (a-b)	800	800	800	800	800	800	387	0	427	800	800	800
d	Partial outage	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>19</b>	<b>0</b>	<b>21</b>	<b>40</b>	<b>40</b>	<b>40</b>
e	Gross Availability (c-d)	760	760	760	760	760	760	368	0	406	760	760	760
f	Local Loads												
g	Cons. in Aux.	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>23.0</b>	<b>0.0</b>	<b>25.4</b>	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>
h	<b>Ex-bus (e-f-g)</b>	712.5	712.5	712.5	712.5	712.5	712.5	344.7	0.0	380.3	712.5	712.5	712.5

**CENTRAL GENERATING STATIONS (CGS) / INTER STATE GENERATING STATIONS (ISGS) / IPPs  
ENERGY AVAILABILITY (NTPC / Kudgi)**

Unit-wise Generation data in MU :

*( FIGS IN MU )*

		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Total
<b>1</b>	<b>Unit - 1</b>													
a	Gross Generation	342	353	342	353	353	342	353	342	353	353	319	353	<b>4161</b>
b	Cons. in Aux	20	20	20	20	20	20	20	20	20	20	18	20	<b>239</b>
c	Supply to DAE Establishment / Local Loads													
d	<b>Ex-bus Generation (a-b-c)</b>	322	333	322	333	333	322	333	322	333	333	301	333	<b>3922</b>
<b>2</b>	<b>Unit - 2</b>													
a	Gross Generation	547	565	547	565	565	547	565	547	565	565	511	565	<b>6658</b>
b	Cons. in Aux	34	35	34	35	35	34	35	34	35	35	32	35	<b>416</b>
c	Supply to DAE Establishment / Local Loads													
d	<b>Ex-bus Generation (a-b-c)</b>	513	530	513	530	530	513	530	513	530	530	479	530	<b>6242</b>
<b>3</b>	<b>Unit - 3</b>													
a	Gross Generation	547	565	547	565	565	547	274	0	302	565	511	565	<b>5555</b>
b	Cons. in Aux	34	35	34	35	35	34	17	0	19	35	32	35	<b>347</b>
c	Supply to DAE Establishment / Local Loads													
d	<b>Ex-bus Generation (a-b-c)</b>	513	530	513	530	530	513	256	0	283	530	479	530	<b>5208</b>
<b>4</b>	<b>Total</b>													
a	Gross Generation	1436	1484	1436	1484	1484	1436	1192	889	1221	1484	1341	1484	<b>16373</b>
b	Cons. in Aux	88	91	88	91	91	88	73	54	75	91	82	91	<b>1003</b>
c	Supply to DAE Establishment / Local Loads													
d	<b>Ex-bus Generation (a-b-c)</b>	1348	1393	1348	1393	1393	1348	1120	835	1146	1393	1258	1393	<b>15371</b>

Note: Unit-3 Overhaul during 2022-23 is for 60 days (from 16-10-2022 to 14-12-2022, both dates inclusive) for Boiler and TG O/H.

800

413

12







**CENTRAL GENERATING STATIONS (CGS) / INTER STATE GENERATING STATIONS (ISGS) / IPPs  
ENERGY AVAILABILITY (NTPC / Simhadri)**

**Unit-wise Generation data in MU :**

*( FIGS IN MU )*

		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Total
<b>1</b>	<b>Unit - 1</b>	<b>30</b>	<b>31</b>	<b>30</b>	<b>31</b>	<b>31</b>	<b>30</b>	<b>31</b>	<b>30</b>	<b>31</b>	<b>31</b>	<b>28</b>	<b>31</b>	
a	Gross Generation	342	353	342	353	353	342	353	342	353	353	319	353	<b>4161</b>
b	Cons. in Aux	20	20	20	20	20	20	20	20	20	20	18	20	<b>239</b>
c	Supply to DAE Establishment / Local Loads													
d	<b>Ex-bus Generation (a-b-c)</b>	322	333	322	333	333	322	333	322	333	333	301	333	<b>3922</b>
<b>2</b>	<b>Unit - 2</b>													
a	Gross Generation	342	353	342	353	353	342	353	103	194	353	319	353	<b>3762</b>
b	Cons. in Aux	20	20	20	20	20	20	20	6	11	20	18	20	<b>216</b>
c	Supply to DAE Establishment / Local Loads													
d	<b>Ex-bus Generation (a-b-c)</b>	322	333	322	333	333	322	333	97	183	333	301	333	<b>3546</b>
<b>3</b>	<b>Unit - 3</b>													
a	Gross Generation	342	353	342	353	353	342	353	342	353	353	319	353	<b>4161</b>
b	Cons. in Aux	20	20	20	20	20	20	20	20	20	20	18	20	<b>239</b>
c	Supply to DAE Establishment / Local Loads													
d	<b>Ex-bus Generation (a-b-c)</b>	322	333	322	333	333	322	333	322	333	333	301	333	<b>3922</b>
<b>3</b>	<b>Unit - 4</b>													
a	Gross Generation	342	353	342	353	353	342	353	342	353	353	319	353	<b>4161</b>
b	Cons. in Aux	20	20	20	20	20	20	20	20	20	20	18	20	<b>239</b>
c	Supply to DAE Establishment / Local Loads													
d	<b>Ex-bus Generation (a-b-c)</b>	322	333	322	333	333	322	333	322	333	333	301	333	<b>3922</b>
<b>4</b>	<b>Total</b>													
a	Gross Generation	1368	1414	1368	1414	1414	1368	1414	1129	1254	1414	1277	1414	<b>16245</b>
b	Cons. in Aux	79	81	79	81	81	79	81	65	72	81	73	81	<b>934</b>
c	Supply to DAE Establishment / Local Loads													
d	<b>Ex-bus Generation (a-b-c)</b>	1289	1332	1289	1332	1332	1289	1332	1064	1182	1332	1203	1332	<b>15311</b>

**Note: Unit-2 Overhaul during 2022-23 is for 35 days (from 10-11-2022 to 14-12-2022)**

**As on 26Aug22** LGBR 2022-23 H2

			Apr	May	Jun	Jul	Aug
DC	%	St-II					
DC	MW	St-II					
DC	MU	St-II					

Planned	From	To	Days
TSTPS U#3			
TSTPS U#4			
TSTPS U#5	1-Jan-23	30-Jan-23	30
TSTPS U#6	1-Nov-22	30-Nov-22	30

31      30      31      31      28      31      182

Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
	94.47	68.49	94.14	69.71	94.89	94.80	86.04
	1771	1284	1765	1307	1779	1777	1613
	1318	925	1313	972	1196	1322	7046

**FY 2022-23 H2**

Apr-22 May-22 Jun-22 Jul-22 Aug-22 Sep-22 Oct-22 Nov-22 Dec-22 Jan-23 Feb-23 Mar-23

Generating Station	Telangana's share (%)	Telangana's share (MW)	PLF (%)	Variable Cost (Rs. / kWh)	Net Energy Availability (MU)												Yearly Auxiliary Consumption (%)	Yearly Auxiliary Consumption (MU)	Remarks	
					April	May	June	July	August	September	October	November	December	January	February	March				Total
SEIL TG-269.45	21.72%	269.45			178.39	191.10	121.34	193.49	200.32	175.16	200.47	194.00	200.47	200.47	181.07	200.47	2236.77	6%	142.77	
SEIL TG-570	45.94%	570.00			377.38	404.26	256.69	409.30	423.76	370.54	424.08	410.40	424.08	424.08	383.04	424.08	4731.70	6%	302.02	

**FY 2023-24**

Apr-23 May-23 Jun-23 Jul-23 Aug-23 Sep-23 Oct-23 Nov-23 Dec-23 Jan-24 Feb-24 Mar-24

Generating Station	Telangana's share (%)	Telangana's share (MW)	PLF (%)	Variable Cost (Rs. / kWh)	Net Energy Availability (MU)												Yearly Auxiliary Consumption (%)	Yearly Auxiliary Consumption (MU)	Remarks	
					April	May	June	July	August	September	October	November	December	January	February	March				Total
SEIL TG-269.45	21.72%	269.45			194.00	200.47	194.00	200.47	200.47	194.00	200.47	113.68	160.31	200.47	181.07	200.47	2239.90	6%	142.97	
SEIL TG-570	45.94%	570.00			410.40	424.08	410.40	424.08	424.08	410.40	424.08	240.49	339.12	424.08	383.04	424.08	4738.33	6%	302.45	

**FY 2022-23 H2**

Generating Station	D Link	Telangana's share (%)	Telangana's share (MW)	PLF (%)	Variable Cost (Rs. / kWh)	Gross Energy Availability (MU)														Yearly Auxiliary Consumption (%)	Yearly Auxiliary Consumption (MU)	Gross Energy Availability (MU)	Remarks
						April	May	June	July	August	September	October	November	December	January	February	March	Total					
SEIL TG-269.45		21.72%	269.45			189.78	203.30	129.09	205.84	213.11	186.34	213.27	206.39	213.27	213.27	192.63	213.27	2379.54	6%	142.77	2379.54		
SEIL TG-570		45.94%	570.00			401.47	430.07	273.08	435.43	450.81	394.19	451.15	436.60	451.15	451.15	407.49	451.15	5033.73	6%	302.02	5033.73		
		67.65%	839.45			591.25	633.37	402.16	641.27	663.92	580.54	664.42	642.98	664.42	664.42	600.12	664.42	7413.27	6%	444.80	7413.27		

**FY 2023-24**

Generating Station	D Link	Telangana's share (%)	Telangana's share (MW)	PLF (%)	Variable Cost (Rs. / kWh)	Gross Energy Availability (MU)														Yearly Auxiliary Consumption (%)	Yearly Auxiliary Consumption (MU)	Gross Energy Availability (MU)	Remarks
						April	May	June	July	August	September	October	November	December	January	February	March	Total					
SEIL TG-269.45		21.73%	269.45			206.39	213.27	206.39	213.27	213.27	206.39	213.27	120.94	170.54	213.27	192.63	213.27	2382.87	6%	142.97	2382.87		
SEIL TG-570		45.97%	570.00			436.60	451.15	436.60	451.15	451.15	436.60	451.15	255.84	360.77	451.15	407.49	451.15	5040.78	6%	302.45	5040.78		
<b>Total</b>		67.65%	839.45			642.98	664.42	642.98	664.42	664.42	642.98	664.42	376.78	531.31	664.42	600.12	664.42	7423.65		445.42	7423.65		

H2 FY 2022-23 (Projected)		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22					
Index No.	Generating Station	D Link	Telanana share	Telangana's share	Normative PLF (%)	Variable Cost (Rs. / kWh)	Plant Capacity (MW)	Net Energy Availability (MU)												Yearly Auxiliary Consumption (%)	Yearly Auxiliary Consumption (MU)	Gross Energy Availability (MU)	Remarks		
			(%)	(MW)				April	May	June	July	August	September	October	November	December	January	February	March					Total	
	<b>IPPs-Others</b>																								
1	Singareni Thermal Power project		100.00%	1200	85%	3.19	1200	-	-	-	-	-	-	824.635	798.034	412.317	571.924	744.831	824.635	4176.376	5.75	254.79	4431.17		
FY 2023-24 (Projected)		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22					
Index No.	Generating Station	D Link	Telanana share	Telangana's share	Normative PLF (%)	Variable Cost (Rs. / kWh)	Plant Capacity (MW)	Net Energy Availability (MU)												Yearly Auxiliary Consumption (%)	Yearly Auxiliary Consumption (MU)	Gross Energy Availability (MU)	Remarks		
			(%)	(MW)				April	May	June	July	August	September	October	November	December	January	February	March					Total	
	<b>IPPs-Others</b>																								
1	Singareni Thermal Power project		100.00%	1200	85%	3.19	1200	798.034	824.635	798.034	824.635	412.317	412.317	824.635	798.034	824.635	824.635	771.432	824.635	8937.98	5.75	545.29	9483.26		

Notes: 1) Unit-1 COH planned for a duration of 50 days in November and Decemeber months of 2022.  
2) Unit-2 COH planned for a duration of 60 days in August and September months of 2023.  
3) The projection of net energy availability is based on estimated declared capacity, however actual energy will be sourced as per day ahead scheudle provided by TSLDC.  
4) Variable cost is considered based on past trend and actual cost will be based on regulation.  
5) Auxilliary consumption is considered based on normative basis allowed to STPP, However actual aux as per past trend is higher in the range of 5.8 % to 6.1%.





**TELANGANA STATE POWER GENERATION CORPORATION LIMITED**

Vidyut Soudha, Hyderabad-500082

Phone :040-23499849/ 827

From  
The Chief Engineer  
Coal & Commercial,  
TSGENCO, Vidyut Soudha,  
Hyderabad-82.

To  
The Executive Director,  
(Commercial)  
TSPCC, Vidyut Soudha,  
Hyderabad-82.

Lr.No.CE(Coal&Comml)/SE(C&C)/DE(C)/ARR FY: 2023-24/D.No: 143/22,dt. 17.11.2022

Sir,

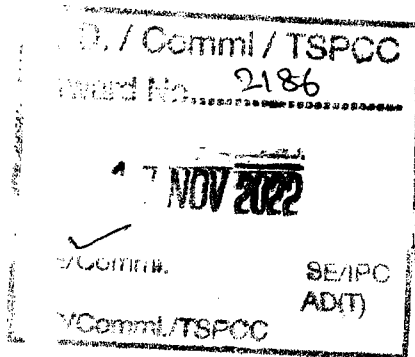
Sub: -ARR for H2 of FY: 2022-23 and FY: 2023-24 – the information for existing and upcoming TSGENCO stations- details of station-wise Energy availability (Month-wise), Fixed Cost, Variable Cost and Other Charges and Overhaul schedules–furnished-Reg.

Ref:- Lr.No. ED (Commercial)/TSPCC/SE(Comml.)/DE-BPP/D.No.36/22, Dt.11.10.2022.

\*\*\*

With reference to the letter cited above, the details of Month wise Energy availability forecast, Fixed & Variable charges and Overhaul Schedules for H2 of FY: 2022-23 and FY: 2023-24 for Existing and upcoming TSGENCO stations are furnished in Annexure I to III.

Encl: As above



*[Signature]*  
Chief Engineer  
(Coal & Commercial)

*Banner*  
17/11

*Adel/BPP*  
*17/11/2022*

*DG/BPP*  
*17/11/2022*

**ANNEXURE-I(a)**

**ENERGY AVAILABILITY(Projections)(in MU) for the FY 2022-23(October 2022- March 2023)**

UNIT	CAPACITY (MW)	Anticipated Generation						Gross Energy GENER. (In MU)	Aux power consumption (in MU)	Net energy available at Ex-Bus (In MU)	PLF %
		Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23				
KTPS-V Stg											
UNIT 9	250	170.79	165.28	170.79	170.79	154.26	170.79	90.24	912.43	91.82	
UNIT 10	250	148.80	144.00	148.80	148.80	134.40	148.80	78.62	794.98	80.00	
Sub total	500	319.59	309.28	319.59	319.59	288.66	319.59	168.86	1707.41	85.91	
KTPS-VI Stg											
UNIT 11	500	297.60	288.00	297.60	297.60	268.80	297.60	131.04	1616.16	80.00	
KTPS-VII Stg	800	595.20	576.00	595.20	595.20	537.60	595.20	183.46	3310.94	100.00	
KTPP- Stg#I	500	351.50	340.16	351.50	351.50	317.49	351.50	154.77	1908.89	94.49	
KTPP- Stg#II	600	357.12	345.60	357.12	357.12	322.56	357.12	146.76	1949.88	80.00	
Sub total	1100	708.62	685.76	708.62	708.62	640.05	708.62	416.03	3744.27	86.59	
RTS-B	62.5	36.37	17.60	36.37	36.37	32.85	36.37	19.59	176.32	71.76	
BTPS											
Unit-1	270.00	180.63	58.27	180.63	180.63	163.15	180.63	80.24	863.71	80.04	
Unit-2	270.00	180.63	174.80	64.09	180.63	163.15	180.63	80.24	863.71	80.04	
Unit-3	270.00	170.75	165.24	170.75	170.75	154.22	170.75	85.21	917.25	85.00	
Unit-4	270.00	170.75	165.24	170.75	170.75	154.22	170.75	85.21	917.25	85.00	
Sub total	1080.00	702.76	563.55	586.22	702.76	634.75	702.76	330.89	3561.91	82.52	
TOTAL(Existing Thermal plants)	4042.50	2660.13	2440.19	2543.60	2660.13	2402.70	2660.13	1135.38	14231.51	87.03	

## Annexure -II(a)

## Month Wise Generation Projections for 2022-23 of Various Hydel Stations (October-2022 to March 2023)

Energy Source	Capacity (MW)	Plant Availability Factor	Gross Energy Availability (MU) (Actuals)					Total (MU)	Yearly Auxiliary Consumption (Oct-22 to March-23)	NET Energy Available at Ex-Bus (MU)	Remarks	
			Oct'22 (MU)	Nov'22 (MU)	Dec'22 (MU)	Jan'23 (MU)	Feb'23 (MU)					Mar-23 (MU)
Srisaillam Left Bank PH	900	83.33	400	90	70	30	79	86	755	5.03	749.97	U#4 is under shut down condition
Nagarjuna Sagar Main PH	815.6	100	450	180	160	130	65	40	1025	4.64	1020.37	
N'Sagar Left Canal	61.2	100	16	11	6	4	2	1	40	0.99	39.01	
Pochampad	36	100	20	10	8	8	8	7	61	0.32	60.6785	
Nizamsagar	10	50	3	1	3	3	2	2	14	0.05	13.95	U#1 is under shut down condition
Singur HES	15	100	6.5	1	1	1	1	1	12	0.19	11.306	
Pedda palli	9.16	100	0.75	0.65	0.02	0.7	0.75	0.8	3.67	0.03	3.641	
Palair	2	100	0.4	0.3	0.3	0.3	0.4	0.3	2	0.01	1.9883	
Priyadarshini Jurala	234	100	95	55	20	30	0	0	200	2.56	197.44	
Lower Jurala	240	100	92	50	20	15	0	0	177	2.03	174.97	
Pulichintala	120	75	40	30	15	10	10	10	115	0.70	114.30	U#3 is under shut down condition
			1123.65	428.95	303.32	232	168.15	148.1	2404.17	16.55	2387.62	

## **ANNEXURE-VIII**

## TSSPDCL

## Power Purchase during FY2022-23 - TSPCC

Station		April'22				May'22				June'22						
		0.7055	Energy	FC	VC	TOTAL	Energy	FC	VC	TOTAL	Energy	FC	VC		TOTAL	
<b>CGS</b>																
NPC Kaiga - I& II			67298399.89	0	233585378.5	233585378	3.47	69867853.46	0	242501560.2	242501560.2	3.47	65007279.46	0	259516573.5	259516573.5
NPC-MAPS			4054427.368	0	10444627.66	10444628	2.58	3048333.572	0	8017768.336	8017768.336	2.63	3572536.298	0	9542188.043	9542188.043
NPC-Kudankulam			0	0	0	0	#DIV/0!	0	0	0	0	#DIV/0!	23284385.5	0	123703534.8	123703534.8
NLC ST-I			4550851.032	4315429.209	12237238.26	16552667	3.64	9315582.854	2466524.654	20742369.52	23208894.17	2.49	4876340.512	2166799.319	13956058.49	16122857.81
NLC ST-II			5630263	5669712	15139776	20809488	3.70	16684865	3447819	38849408	42297227	2.54	5904425	2444008	17260583	19704591
NNTPS			24857392	45547182	54611689	100158871	4.03	31827105	49314911	69300620	118615532	3.73	25500056	46358230	56488376	102846606
NTPC(SR) I & II			148569918	106401124	408167319	514568443	3.46	154471635	103991157	502757559	606748716	3.93	162578767	99802071	784279971	884082042
NTPC(SR) ST III			42051279	32145187	116705670	148850857	3.54	42274604	37424175	129957342	167381518	3.96	15603496	16085763	56749913	72835677
NTPC-Simhadri -I			246182586	216463078	986795743	1203258821	4.89	232732713	571319552	905097519	1476417072	6.34	232335685	210636356	953271856	1163908212
NTPC-Simhadri -II			113332043	151023844	445182506	596206349	5.26	92778676	429659560	340033848	769693407	8.30	55695894	85791766	220675118	306466884
NTPC-Talcher-ST II			99075872	72070826	183089434	255160260	2.58	116287976	93482669	187620359	281103028	2.42	110761866	77467596	210004498	287472094
NTPC KUDIGI I			95900315	167349835	466110432	633460267	6.61	84010097	186872892	446910202	633783095	7.54	109951520	187041761	587527542	774569303
NTECL - VALLURU			60247808	101717025	181514719	283231744	4.70	66937925	84590683	255957136	340547818	5.09	54785010	82192728	219011294	301204022
NLC Tamilnadu Power Ltd			41392647	55728904	159775616	215504520	5.21	113251467	108098481	456290160	564388642	4.98	64674703	98833747	261479825	360313572
<b>Sub-TOTAL</b>			<b>953143799</b>	<b>958432145</b>	<b>3273360150</b>	<b>4231792295</b>	<b>4.44</b>	<b>1033488833</b>	<b>1670668425</b>	<b>3604035851</b>	<b>5274704276</b>	<b>5.10</b>	<b>934531964</b>	<b>908820825</b>	<b>3773467331</b>	<b>4682288157</b>
<b>IPPs</b>																
M/s Thermal Powertech 570MW			266240761	657661324	672612978	1330274302	5.00	229433816	672285400	785544470	1457829870	6.35	178038916	411563381	435841560	847404941
Thermal Powertech			125856962	184450484	282423022	466873506	3.71	134823578	192152331	302678932	494831263	3.67	86606749	172200262	187012254	359212515
<b>Sub-TOTAL</b>			<b>392097723</b>	<b>842111808</b>	<b>955036000</b>	<b>1797147808</b>	<b>4.58</b>	<b>364257394</b>	<b>864437731</b>	<b>1088223402</b>	<b>1952661133</b>	<b>5.36</b>	<b>263645666</b>	<b>583763643</b>	<b>622853814</b>	<b>1206617456</b>
Trading			1089809437	0	9707232873	9707232873	8.91	174275672	0	1467267380	1467267380	8.42	138401531	0	1977041671	1977041671
NCEs- TSNPDCL	NP		0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0
NCEs- TSSPDCL	SP		455357795	0	2754525427	2754525427	6.05	334343197	0	1974880552	1974880552	5.91	361555582	0	2123970421	2123970421
NVNL B.P-Solar			2691535	0	29402598	29402598	10.92	2260768	0	24631517	24631517	10.90	2785436	0	29624132	29624132
NVNL B.P-Coal	0.539		18892415	0	95560903	95560903	5.06	16969305	0	83048510	83048510	4.89	18206697	0	102393327	102393327
NSM-Solar Phase II			42776157	0	210411741	210411741	4.92	56906455	0	273689815	273689815	4.81	45782667	0	220517875	220517875
NSM-Coal Phase II			84250827	0	311899519	311899519	3.70	86281041	0	396097512	396097512	4.59	97643989	0	540860801	540860801
NTPC -Solar-Phase I			30829588	42433	88172622	88215055	2.86	32291770	0	92151185	92151185	2.85	38479774	138193	109552370	109690564
NTPC -Solar-Phase II			0	0	0	0	#DIV/0!	0	0	0	0	#DIV/0!	0	0	0	0
Solar Energy Corporation of India			36896368	0	90489756	90489756	2.45	38478383	0	103005883	103005883	2.68	33124066	0	92084904	92084904
KTPS V (D)	2.27		212299801	218946046	671790827	890736873		213619378	218946046	696888147	915834193		191273396	218946046	644339126	863285172
KTPS VI	3.10		208805353	306769038	729472416	1036241453		189636213	306769038	667352300	974121337		200209400	306769038	680051194	986820232
KTPS Stage VII			302104839	576136000	860442344	1436578343		351373349	656544131	1023311320	1679855451		345689276	638129494	979822088	1617951582
RTS-B	2.34		8033902	24961443	33082647	58044090		20280141	61569192	88091116	149660308		19097832	59136960	80652940	139789900
Kakatiya Stage-I	2.36		199780661	288096804	666109484	954206288		170211135	282118796	555576344	837695139		-2506193	3133053	-5127649	
Kakatiya Stage-II			229789666	423364671	749834058	1173198729		281519863	423364671	895062048	1318426719		266284879	423364671	873594005	1296958676
BTPS	2.79		353355319	941660896	962864009	1904524905		312825755	806564659	938641340	1745206000		274903719	734870023	809218272	1544088295
Interest on Pension bonds			0	768665767	0	768665767		0	768665767	0	768665767		0	768665767	0	768665767
TSGENCO-Hydel			48644552	782393621	0	782393621		30145048	782393621	0	782393621		52638864	782393621	0	782393621
Thermal Incentive 2021-22			0	0	0	0		0	0	0	0		0	0	0	0
Infirm Power BTPS-IV			0	0	0	0		0	0	0	0		0	0	0	0
<b>TSGENCO-TOTAL</b>			<b>1562814094</b>	<b>4330994285</b>	<b>4673595785</b>	<b>9004590071</b>	<b>5.76</b>	<b>1569610883</b>	<b>4306935920</b>	<b>4864922616</b>	<b>9171858536</b>	<b>5.84</b>	<b>1347591174</b>	<b>3935408673</b>	<b>4059416924</b>	<b>7994825597</b>
SINGARENI CCCL unit 1&2			545831240	832584067	2103939936	2936524003	5.38	466397584	832584066	1399192752	2231776818	4.79	507337044	832584066	1604199732	2436783798
Chatthigarh			0	0	0	0	#DIV/0!	0	0	0	0	#DIV/0!	0	0	0	0
PGCIL POC			0	839495196	0	839495196		0	722984404	0	722984404		0	726609678	0	726609678
PGCIL Non POC			0	421421	0	421421		0	421421	0	421421		0	421421	0	421421
UI-SRPC/Deviation charges			0	0.00	13338357	13338357		0	0.00	78740553	78740553		0.00	98441421	0	98441421
Reactive			0	6816489	0	6816489		0	32851522	0	32851522		0	32912163	0	32912163
POSOCO			0	1821800	0	1821800		0	1831592	0	1831592		0	2222395	0	2222395
TSTRANSCO-TR TSNPDCL	NP		0	0	0	0		0	0	0	0		0	0	0	0
TSTRANSCO-TR TSSPDCL	SP		0	1986368826	0	1986368826		0	1986368826	0	1986368826		0	1986368826	0	1986368826
TSTRANSCO-SLDC TSNPDCL	NP		0	0	0	0		0	0	0	0		0	0	0	0
TSTRANSCO-SLDC TSSPDCL	SP		0	45478889	0	45478889		0	22584814	0	22584814		0	22584814	0	22584814
Wheeling KPTCL			0	0	0	0		0	0	0	0		0	0	0	0
Wheeling TNEB/Asset Maintenance			0	0	0	0		0	0	0	0		0	0	0	0
STOA			0	25770504	0	25770504		0	8976356	0	8976356		0	8772272	0	8772272
LTOA			0	310488	0	310488		0	309971	0	309971		0	352742	0	352742
Conjestion charges			0	0	0	0		0	0	0	0		0	0	0	0
<b>TOTAL</b>			<b>5215390979</b>	<b>9870648351</b>	<b>24306965667</b>	<b>34177614018</b>	<b>6.55</b>	<b>4175561286</b>	<b>10450955050</b>	<b>15449887528</b>	<b>25900842578</b>	<b>6.20</b>	<b>3789085590</b>	<b>9040959711</b>	<b>15354424723</b>	<b>24395384434</b>

6.55

6.20

6.44

July'22					Aug'22					Sep'22					TOTAL			
Energy	FC	VC	TOTAL		Energy	FC	VC	TOTAL		Energy	FC	VC	TOTAL		Energy	FC	VC	Amount
69737192.74	0	244972686.1	244972686.1		68602831	0	239208460	239208460		53886197	0	188391046	188391046		394399754	0	1408175704	1408175704
5087589.082	0	13256996.18	13256996.18		3691728	0	9584273	9584273		4540108	0	11785326	11785326		23994722	0	62631179	62631179
23875466.09	0	98409028.1	98409028.1		25048379	0	103296026	103296026		24256203	0	106520114	106520114		96464434	0	431928702	431928702
5530592.992	1499710.276	15198069.37	16697779.64		3331209	1087262	9190805	10278067		2023653	944861	5603494	6548355		29628229	12480587	76928034	89408621
11446466	3024328	31454888	34479216		9223476	2945986	25447571	28393557		6881220	2673684	19054097	21727782		55770715	20205537	147206324	167411861
32152221	50104990	71410082	121515072		28011947	47204777	62326581	109531358		25787595	46057110	57093735	103150845		168136315	284587200	371231083	655818283
131087430	103454346	654650624	758104970		87503201	101770726	421065403	522836129		76676290	100832967	391049077	491882044		760887240	616252390	3161969955	3778222345
0	-224798	0	-224798		17503212	18616136	84943089	103559225		26207914	35527213	136648064	172175276		143640505	139573676	525004079	664577755
202321535	205484592	934118529	1139603122		174125951	208687061	798541610	1007228671		169490040	209346839	843890907	1053237746		1257188510	1621937478	5421716164	7043653642
77308021	139356071	363347700	502703771		83916919	180462812	386017826	566480638		63092164	157378105	320127167	477505272		486123717	1143672157	2075384164	3219056321
130144710	87813349	310430669	398244018		110614186	78384465	261173251	339557716		103936913	76038025	233130497	309168521		670821524	485256930	1385448708	1870705638
75150441	187873183	480489044	668362228		69366795	187805028	446522461	634327490		72828790	241245902	462972616	704218518		507207958	1158188601	2890532298	4048720900
30401662	78624418	125411934	204036352		29641216	73719730	127459524	201179254		36495538	84190914	152322933	236513848		278509158	505035498	1061677541	1566713038
54135920	89568368	224230982	313799350		56539093	96573614	252616668	349190282		35431651	97114271	155438655	252552926		365425481	545917386	1509831905	2055749291
<b>848379248</b>	<b>946578557</b>	<b>3567381232</b>	<b>4513959790</b>		<b>767120142</b>	<b>997257597</b>	<b>3227393548</b>	<b>4224651145</b>		<b>701534276</b>	<b>1051349891</b>	<b>3084027727</b>	<b>4135377618</b>		<b>5238198262</b>	<b>6533107440</b>	<b>20529665840</b>	<b>27062773281</b>
261195041	672285400	724870764	1397156164		271443400	674999177	746470118	1421469295		206831812	650598775	533771534	1184370309		1413183747	3739393457	3899111425	7638504882
136504673	201853806	308500561	510354367		141069510	194619491	320650997	515270488		123576869	178822834	280766646	459589479		747438341	1124099208	162032411	2806131619
<b>397699714</b>	<b>874139206</b>	<b>1033371325</b>	<b>1907510531</b>		<b>412512911</b>	<b>869618668</b>	<b>1067121116</b>	<b>1936739784</b>		<b>330408681</b>	<b>829421608</b>	<b>814538180</b>	<b>1643959788</b>		<b>2160622088</b>	<b>4863492664</b>	<b>5581143836</b>	<b>10444636501</b>
427055091	0	1791072419	1791072419		346370650	0	1504534567	1504534567		375429973	0	1587027686	1587027686		2551342354	0	18034176595	18034176595
0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
236649541	0	1386967898	1386967898		287885478	0	1692381378	1692381378		285235623	0	1673183922	1673183922		1961027216	0	11605909600	11605909600
1005004	0	10824416	10824416		1782912	0	18748028	18748028		2032310	0	21437211	21437211		12557965	0	134667902	134667902
12406297	0	92005674	92005674		10929985	0	86152566	86152566		14628404	0	95899284	95899284		92033104	0	555060263	555060263
50528204	0	242880122	242880122		18538055	0	89460143	89460143		51175874	0	246277092	246277092		265707412	0	1283236787	1283236787
68177567	0	311744311	311744311		92788604	0	426738326	426738326		66542101	0	312777334	312777334		495684130	0	2300117803	2300117803
38452048	71307	109565924	109637231		69289446	78525	197438193	197516718		90859174	258922776	104250	259027026		300201801	259253235	596984544	856237778
0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
30362138	0	84406743	84406743		33239924	0	92406988	92406988		39742106	0	110483055	110483055		211842985	0	572877329	572877329
92450272	185885193	347846610	533731803		161278464	191659895	590538404	782198298		189910159	234792266	694695339	929487606		1060831470	1269175492	3646098454	4915273945
211865671	306769038	787476502	1094245539		217440885	306769038	771855688	1078624725		205742637	306769038	773735924	1080504962		1233700160	1840614225	4409944023	6250558248
15209875	40204065	40675696	80879761		-1222324	-6089302	-3227329	-9316631		19235018	42038193	58985669	101023862		1032390034	1946962581	2960009788	4906972369
15401464	46283415	67725315	114008730		19388195	58639862	87123017	145762879		17248212	53580110	79919062	133499172		99449746	304170982	436594097	740765079
44244606	64929817	152706207	217636024		196046729	307579351	706484216	1014063567		200533512	326161594	698511805	1024673400		808310450	1272019414	2771127355	4043146770
259135087	423364671	869701139	1293065810		207506644	423364671	730951071	1154315742		250610763	423364671	850958988	1274323659		1494846903	2540188026	4970101309	7510289336
197192189	503467559	644299754	1147767313		286375855	738615266	880218106	1618833372		314987407	838131701	979792138	1817923839		1739640243	4563310103	5215033620	9778343723
0	768665767	0	768665767		0	768665767	0	768665767		0	768665767	0	768665767		0	4611994603	0	4611994603
303552665	782393621	0	782393621		883709487	782393621	0	782393621		906368029	782393621	0	782393621		2225058645	4694361726	0	4694361726
0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
<b>1139051828</b>	<b>3121963146</b>	<b>2910431223</b>	<b>6032394369</b>		<b>1970523934</b>	<b>3571598168</b>	<b>3763943173</b>	<b>7335541341</b>		<b>2104635737</b>	<b>3775896960</b>	<b>4136598926</b>	<b>7912495886</b>		<b>9694227650</b>	<b>23042797152</b>	<b>24408908646</b>	<b>47451705798</b>
545955408	832584067	1767257656	2599841722		507538817	832584067	1660667008	2493251074		562996055	832584067	1853946009	2686530076		3136056147	4995504400	10389203092	15384707492
0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
0	807669467	0	807669467		0	725022923	0	725022923		0	758727208	0	758727208		0	4580508875	0	4580508875
0	421421	0	421421		0	10742725	0	10742725		0	421421	0	421421		0	12849831	0	12849831
0	0.00	43834422	43834422		0	0.00	125254502	125254502		0	0.00	101706181	101706181		0	0	461315437	461315437
0	32149170	0	32149170		0	20974881	0	20974881		0	13181056	0	13181056		0	138885281	0	138885281
0	1942155	0	1942155		0	1970087	0	1970087		0	1998315	0	1998315		0	11786344	0	11786344
0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
0	1986368826	0	1986368826		0	1986368826	0	1986368826		0	1986368826	0	1986368826		0	11918212956	0	11918212956
0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
0	26165650	0	26165650		0	22584814	0	22584814		0	45353784	0	45353784		0	184752765	0	184752765
0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
0	11836486	0	11836486		0	16648295	0	16648295		0	20030870	0	20030870		0	92034782	0	92034782
0	309458	0	309458		0	308866	0	308866		0	308715	0	308715		0	1900239	0	1900239
0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
<b>3795722088</b>	<b>8642198916</b>	<b>13351743365</b>	<b>21993942281</b>	5.79	<b>4518520857</b>	<b>9055758440</b>	<b>13952239535</b>	<b>23007997975</b>	#REF!	<b>4625220314</b>	<b>9574565496</b>	<b>14038006857</b>	<b>23612572353</b>	#REF!	<b>26119501113</b>	<b>56635085964</b>	<b>9645326767</b>	

STATION	Capacity	Fixed Charges per Annum														
THERMAL		Amount Rs.(TS Share only)	ECR	Apr-22	FC	VC	TC	May-22	FC	VC	TC	Jun-22	FC	VC	TC	
	MW	Rs. In Crores	Rate/Kwh	UNITS/KWH				UNITS/KWH				UNITS/KWH				
KTPS-V	500	372.41	2.668	300921050	310341667	802857361	1113199028	302791464	310341667	807847626	1118189293	271117500	310341667	723341490	1033683157	
KTPS-VI	500	521.79	2.733	295967900	434825000	808880271	1243705271	268796900	434825000	734621927.7	1169446928	283783700	434825000	775580852	1210405852	
KTPS Stage VII	800	1060.7	2.409	428213805	816635010	1031567056	1848202066	498048688	930608265	1199799289	2130407554	489991887	904506725	1180390456	2084897181	
RTS-B	62.5	113.24	2.988	11387530	35381209	34025939.6	69407149	28745770	87270293	85892361	173162653.8	27069925	83822764	80884936	164707699.9	
KTPP St.I	500	490.03	3.035	283175990	408358333	859439130	1267797463	241263126	399884898	732233587	1132118485	-3552364	4440897	-10781425	-6340527.74	
KTPP St.II	600	720.11	2.925	325711788	600091667	952706980	1552798647	399035951	600091667	1167180157	1767271824	377441360	600091667	1104015978	1704107645	
BTPS 1,2,3 &4	1080	1933.86	2.363	500858000	1334742588	1183527454	2518270042	443410000	1143252529	1047777830	2191030359	389658000	1041630082	920761854	1962391936	
<b>Thermal total</b>	<b>4042.5</b>	<b>5212.14</b>		<b>2146236063</b>	<b>3940375474</b>	<b>5673004192</b>	<b>9613379666</b>	<b>2182091899</b>	<b>3906274319</b>	<b>5775352778</b>	<b>9681627097</b>	<b>1835510008</b>	<b>3379658802</b>	<b>4774194141</b>	<b>8153852943</b>	
<b>HYDEL</b>																
N.SAGAR Complex	875.6	346.98		49518464	289150000		289150000	36021824	289150000		289150000	62174780	289150000		289150000	
SRISAILAM LBPH	900	463.98		-346571	386650000		386650000	-731045	386650000		386650000	-692938	386650000		386650000	
Small Hydel (pochampadu-1,singur	54	49.23		8042182	41025000		41025000	-95316	41025000		41025000	721362	41025000		41025000	
MINI HYDEL(Peddapalli)	9.16	9.20		333800	7666667		7666667	-23400	7666666.67		7666666.667	-22800	7666667		7666666.667	
Priyadarshini Jurala	234	62.25		-70462	51875000		51875000	-50462	51875000		51875000	1149236	51875000		51875000	
Pochmpadu St.II	9	10.26		0	8550000		8550000	0	8550000		8550000	0	8550000		8550000	
Lower Jurala	240	265.36		-156513.8	221133333		221133333	-168847	221133333		221133333.3	3082494	221133333		221133333.3	
Pulichintala	120	123.53		11629564	102941667		102941667	7775876	102941667		102941666.7	8200004	102941667		102941666.7	
<b>Hydel total</b>	<b>2441.76</b>	<b>1330.79</b>		<b>68950463</b>	<b>1108991667</b>	<b>0</b>	<b>1108991667</b>	<b>42728630</b>	<b>1108991667</b>	<b>1108991667</b>	<b>1108991667</b>	<b>74612138</b>	<b>1108991667</b>	<b>0</b>	<b>1108991667</b>	
Addl Int on pension bonds					1045841667		1045841667		1045841667		1045841667		1045841667		1045841667	
Water Charges					43691667		43691667		43691667		43691667		43691667		43691667	
<b>G. TOTAL</b>	<b>6484.26</b>	<b>6542.93</b>		<b>2215186526</b>	<b>6138900474</b>	<b>5673004192</b>	<b>11811904666</b>	<b>2224820529</b>	<b>6104799319</b>	<b>6884344445</b>	<b>11880152097</b>	<b>1910122146</b>	<b>5578183802</b>	<b>4774194141</b>	<b>10352377943</b>	
Grand Toal (Bill1+Bill2+Bill3)				<b>2215186526</b>	<b>6138900474</b>	<b>5673004192</b>	<b>11811904666</b>	<b>2224820529</b>	<b>6104799319</b>	<b>6884344445</b>	<b>11880152097</b>	<b>1910122146</b>	<b>5578183802</b>	<b>4774194141</b>	<b>10352377943</b>	
TDS @ 0.1% U/s 194Q												0				
<b>Net Amount Payable</b>												0				

5.33

5.34

0.31

5.42

Jul-22	FC	VC	TC	Aug-22	FC	VC	TC	Sep-22	FC	VC	TC	2022-23 H1	FC	VC	TC
UNITS/KWH				UNITS/KWH				UNITS/KWH							
131042200	263480075	349620590	613100665	228601650	271665336	609909202	881574538	269185200	332802645	718186113.6	1050988759	1503659064	1798973057	4011762383	5810735440
300305700	434825000	820735478	1255560478	308208200	434825000	842333011	1277158011	291626700	434825000	797015771.1	1231840771	1748689100	2608950000	4779167310	7388117310
21559000	56986627	51935631	108922258	-1732564	-8631186	-4173747	-12804933	27264377	59586382	65679884.19	125266266	1463345193	2759691823	3525198570	6284890393
21830565	65603707	65229728	130833435	27481495	83118160	82114707	165232867	24448210	75946293	73051251.48	148997544	140963495	431142426	421198923.1	852341349.1
62713828	92033759	190336468	282370227	277883386	435973566	843376077	1279349643	284243107	462312678	862677829.7	1324990508	1145727073	1803004131	3477281667	5280285798
367306998	600091667	1074372969	1674464636	294127064	600091667	860321662	1460413329	355224328	600091667	1039031159	1639122826	2118847489	3600550002	6197628905	9798178907
279507000	713632259	660475041	1374107300	405919000	1046938718	959186597	2006125315	446474000	1187996741	1055018062	2243014803	2465826000	6468192917	5826746838	12294939755
<b>1184265291</b>	<b>2226653094</b>	<b>3212705905</b>	<b>5439358999</b>	<b>1540488231</b>	<b>2863981261</b>	<b>4193067509</b>	<b>7057048770</b>	<b>1698465922</b>	<b>3153561406</b>	<b>4610660072</b>	<b>7764221478</b>	<b>10587057414</b>	<b>19470504356</b>	<b>28238984596</b>	<b>47709488952</b>
												0	0	0	0
42581444	289150000		289150000	479769116	289150000		289150000	579462588	289150000		289150000	1249528216	1734900000	0	1734900000
248760078	386650000		386650000	522159254	386650000		386650000	484321558	386650000		386650000	1253470336	2319900000	0	2319900000
12102002	41025000		41025000	27011088	41025000		41025000	27117102	41025000		41025000	74898420	246150000	0	246150000
400	7666666.67		7666666.67	829600	7666666.667		7666667	437200	7666666.67		7666667	1554800	46000000	0	46000000
38285162	51875000		51875000	62155615	51875000		51875000	48067425	51875000		51875000	149536514	311250000	0	311250000
4014000	8550000		8550000	5321000	8550000		8550000	5720000	8550000		8550000	15055000	51300000	0	51300000
68176297.7	221133333		221133333	105715719	221133333.3		221133333	93328135.1	221133333		221133333	269977284.6	1326800000	0	1326800000
16346619	102941667		102941667	49638873	102941666.7		102941667	46263255	102941667		102941667	139854191	617650000	0	617650000
<b>430266003</b>	<b>1108991667</b>	<b>0</b>	<b>1108991667</b>	<b>1252600265</b>	<b>1108991667</b>	<b>0</b>	<b>1108991667</b>		<b>1108991667</b>		<b>1108991667</b>	<b>3153874762</b>	<b>6653950000</b>	<b>0</b>	<b>6653950000</b>
	<b>1045841667</b>		1045841667		<b>1045841667</b>		1045841667		<b>1045841667</b>		1045841667	0	6275050000	0	6275050000
	<b>43691667</b>		43691667		<b>43691667</b>		43691667		<b>43691667</b>		43691667	0	262150000	0	262150000
<b>1614531294</b>	<b>4425178094</b>	<b>3212705905</b>	<b>7637883999</b>	<b>2793088496</b>	<b>5062506261</b>	<b>4193067509</b>	<b>9255573770</b>	<b>1698465922</b>	<b>5352086406</b>	<b>4610660072</b>	<b>9962746478</b>	<b>13740932176</b>	<b>32661654356</b>	<b>28238984596</b>	<b>60900638952</b>
1614531294	4425178094	3212705905	7637883999	2793088496	5062506261	4193067509	9255573770	1698465922	5352086406	4610660072	9962746478	13740932176	32661654356	28238984596	60900638952
0				0											
0				0								13740932176	32661654362	34598027847	67259682209

4.73

3.31

-1

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-6359043251 -6359043257



## **Annexure-IX**

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 199/GT/2017**

**Coram:**

**Shri P.K.Pujari, Chairperson**

**Dr. M.K. Iyer, Member**

**Shri I.S.Jha, Member**

**Date of Order: 8<sup>th</sup> January, 2020**

**In the matter of**

Petition for determination of tariff of Kudgi Super Thermal Power Station, Stage-I (2400 MW) for the period from COD of Unit-I to 31.3.2019

**And**

**In the matter of**

NTPC Ltd

NTPC Bhawan, Core-7, SCOPE Complex,  
7, Institutional Area, Lodhi Road,  
New Delhi-110003

.....Petitioner

**Vs**

1. Andhra Pradesh Eastern Power Distribution Company Ltd  
Corporate Office P&T Colony, Seethammadhara,  
Visakhapatnam-530013
2. Andhra Pradesh Southern Power Distribution Company Ltd,  
Corporate Office, Back side Srinivasa Kalyana Mandapam  
Tiruchhanur Road, Kesavayana Gunta,  
Tirupati-517503
3. Telangana State Northern Power Distribution Company Ltd  
H.No 2-5-31/2, Vidyut Bhawan  
Nakkalagutta, Hanamkonda,  
Warangal-506001
4. Telangana State Southern Power Distribution Company Ltd  
Mint Compound, Corporate Office, Hyderabad-500063
5. Tamil Nadu Generation & Distribution Corporation Ltd.  
144, Anna Salai, Chennai- 600002
6. Bangalore Electricity Supply Company Ltd.  
K.R.Circle, Bengaluru- 560001
7. Mangalore Electricity Supply Company Limited  
Corporate Office, MESCOM Bhavan, First floor,  
Kavoor Cross Road, Bijai,  
Mangalore- 575004



8. Chamundeshwari Electricity Supply Company Limited  
Corporate Office No. 29, Vijayanagara 2<sup>nd</sup> Stage, Hinkal,  
Mysore- 570017

9. Gulbarga Electricity Supply Company Limited  
Station Main Road, Gulbarga- 585102

10. Hubli Electricity Supply Company Limited  
Corporate Office, Navanagar, PB Road,  
Hubli- 580025

11. Kerala State Electricity Board Ltd  
Vaidyuthi Bhavanam, Pattom  
Thiruvananthapuram- 695004

.....Respondents

### **Parties present**

Shri Rohit Chhabra, NTPC  
Shri Patanjali Dixit, NTPC  
Shri Vineet Kant Rajora, NTPC  
Shri S.Vallinayagam, Advocate, TANGEDCO  
Shri Arunav Patnaik, Advocate, Karnataka discoms  
Shri Shikhar Saha, Advocate, Karnataka discoms

### **ORDER**

The Petitioner, NTPC has filed this petition for approval of tariff of Kudgi Super Thermal Power Station (3 x 800 MW) (“the generating station/ Project”) based on the anticipated COD of Unit-I (25.7.2017) to 31.3.2019, in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”). Pursuant to the actual COD of Unit-I on 31.7.2017, Unit-II on 31.12.2017 and Unit-III on 15.9.2018, the Petitioner vide affidavit dated 4.3.2019 has amended the petition and has prayed for approval of tariff of the generating station from the actual COD of the said units till 31.3.2019.

2. The generating station, located in the Bijapur district of the State of Karnataka, comprises of three units of 800 MW each. The Ministry of Power, GOI



vide its letter dated 6.10.2015 had allocated the power from the generating station to the Respondent beneficiaries as detailed below:

States	Total allocation in (MW) (rounded off)	Share in installed capacity (%)
Karnataka (including home State share)	1200.00	50.00
Tamilnadu	300.00	12.50
Kerala	105.00	4.38
Telangana	234.00	9.75
Andhra Pradesh	201.00	8.38
Unallocated	360.00	15.00
<b>Total</b>	<b>2400.00</b>	<b>100.00</b>

3. The Investment Approval (IA) of the project was accorded by the Board of the Petitioner Company in its 376<sup>th</sup> meeting held on 28.12.2011 and the same was subject to Environmental Clearance (EC) of MOE&F, GOI. The approval was granted at an estimated cost of ₹15166.19 crore, including Interest During Construction & Financing Cost of ₹ 2487.67 crore and Working Capital Margin of ₹445.77 crore as of the 4<sup>th</sup> quarter 2011 price level and corresponding indicative estimated completed cost of ₹16934.65 crore, including IDC & FC of ₹2654.84 crore and WCM of ₹460.06 crore. Accordingly, the capital cost and annual fixed charges claimed by the Petitioner as per Form 1(i) and Form 1 of the amended petition for the period from actual COD of Unit-I (2017-18) to 2018-19 is as under:

(a) Capital cost

(₹ in lakh)

	2017-18	2017-18	2018-19	2018-19
	31.7.2017 (COD of Unit-I) to 30.12.2017	31.12.2017 (COD of Unit-II) to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 (COD of Unit-III) to 31.3.2019
Capital Cost as on COD	602597.84	970642.36	1086947.95	1362547.31
Railway augmentation deposit works	94600.00	94600.00	-	94600.00
ERV charged to revenue	(-) 1753.00	(-) 1984.00	-	15025.00
Inter-Unit transfer out before COD	2157.00	2157.00	-	2157.00
Notional IDC	1251.00	1251.00	-	1322.00



Unamortised Finance Charges	616.00	1536.00	-	1633.00
Opening Capital Cost	699468.84	1068202.36	1086947.95	1477284.31
Add: Additions during the year / period & Liability discharged	36657.69	18745.59	45073.60	45225.00
<b>Closing Capital Cost</b>	<b>736126.53</b>	<b>1086947.95</b>	<b>1132021.54</b>	<b>1522509.31</b>
Average Capital Cost	717797.69	1077575.15	1109484.75	1499896.81

**(b) Annual Fixed Charges**

	(₹ in lakh)			
	2017-18	2017-18	2018-19	2018-19
	31.7.2017 (COD of Unit-I) to 30.12.2017	31.12.2017 (COD of Unit-II) to 31.3.2018	01.04.2018 to 14.09.2018	15.09.2018 (COD of Unit-III) to 31.03.2019
Depreciation	35271.22	53933.71	55509.74	75792.79
Interest on Loan	31642.14	47151.66	47581.99	63005.56
Return on Equity	42433.60	63702.34	65761.95	88902.66
Interest on Working Capital	11347.93	21886.70	22067.52	33698.00
O&M Expenses	14843.29	28683.29	30299.43	45003.43
<b>Total</b>	<b>135538.18</b>	<b>215357.71</b>	<b>221220.63</b>	<b>306402.44</b>

**Commissioning schedule**

4. As stated, the IA of the project was accorded by the Board of the Petitioner Company in its 376<sup>th</sup> meeting on 28.12.2011 with indicative estimated completed cost of ₹16934.65 crore, which included the IDC & FC of ₹2654.84 crore and WCM of ₹460.06 crore, which was subject to Environmental Clearance (EC). The EC was granted by MOE&F, GOI on 25.1.2012. The Petitioner in Form-5D has submitted that the Steam Turbine and Generator Package was awarded on 17.2.2012. Considering the date of EC, the Petitioner has considered 25.1.2012 as the 'Zero Date'. The Petitioner has considered Scheduled Commercial Operation Date (SCOD) of Unit-I as 31.5.2016, of Unit-II as 30.11.2016 and of Unit-III as 30.5.2017. However, considering the timeline of 52 months for Unit-I and subsequent units at an interval of 6 months in terms of the 2014 Tariff Regulations for Greenfield projects, the SCOD of the units of the project is worked out as 25.5.2016 for Unit-I, 25.11.2016 for Unit-II and 25.5.2017 for Unit-III. These dates have been considered for the purpose of analysis of time overrun of the project.



5. The actual COD of Unit-I is 31.7.2017, of Unit-II is 31.12.2017 and of Unit-III is 15.9.2018, thereby resulting in the delay of 14.2 months for Unit-I, 13.2 months for Unit-II and 15.7 for Unit-III from SCOD as under:

	SCOD	Actual COD	Time overrun
Unit-I	25.5.2016	31.7.2017	14.2 months
Unit-II	25.11.2016	31.12.2017	13.2 months
Unit-III	25.5.2017	15.9.2018	15.7 months

### **Admissibility of additional ROE**

6. The timeline for completion of Project as specified under the 2014 Tariff Regulations for green field projects (Coal/lignite) with a unit size of 660 MW/800 MW from the date of IA is 52 months for the first unit, with SCOD of subsequent units at an interval of 6 months each. The zero date of the project is 25.1.2012. The SCOD of Unit-I is 25.5.2016, Unit-II is 25.11.2016 and Unit-III is 25.5.2017 and the actual COD of Unit-I is 31.7.2017, Unit-II is 31.12.2017 and Unit-III is 15.9.2018. Since the actual time taken for declaration of commercial operation of Unit-I is 67 months, 72 months for Unit-II and 81 months for Unit-III (that is more than 52 months for all the units), the Petitioner is not entitled for additional RoE of 0.5% considered towards timely completion of the project.

### **Time Overrun**

7. The Petitioner vide its affidavit dated 4.3.2019 has submitted that the COD of the Units got delayed on account of the following reasons, which were beyond its control:

- (a) Right of Use (RoU) for Make-up Water Pipelines
- (b) Ban imposed on the river bed sand mining by NGT order dated 5.8.2013 (Change of law)
- (c) Law and Order Issues (Bandhs/agitations/riots etc)
- (d) Drought
- (e) Villagers' resistance - Power Input arrangement for running design make up water pump



(f) Villagers' resistance - Northern side Railway siding and water reservoir for Lagoon-2

8. The Petitioner vide its affidavit dated 10.6.2019 has furnished unit-wise reasons for time overrun along with the delay analysis, indicating the activities delayed, the reasons for the said delay and the corresponding delay on account of the delay in each of the activities, corresponding to the units. The Respondents TANGEDCO, BESCO, KSEB and CESC have filed their replies in the matter. The Petitioner has filed its rejoinder to the said replies.

### **Analysis and decision**

9. For prudence check of time over run and cost overrun of a project, the Appellate Tribunal for Electricity (the Tribunal) in its judgment dated 27.4.2011 in Appeal No. 72 of 2010 (MSPGCL V MERC & ors) had laid down the following principles:

*"7.4. The delay in execution of a generating project could occur due to following reasons:*

*(i) Due to factors entirely attributable to the generating company, e.g., imprudence in selecting the contractors/suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors/suppliers as per the terms of contract, mismanagement of finances, slackness in project management like improper co-ordination between the various contractors, etc.*

*(ii) Due to factors beyond the control of the generating company e.g. delay caused due to force majeure like natural calamity or any other reasons which clearly establish, beyond any doubt, that there has been no imprudence on the part of the generating company in executing the project.*

*(iii) Situation not covered by (i) & (ii) above.*

*In our opinion in the first case the entire cost due to time over run has to be borne by the generating company. However, the Liquidated damages (LDs) and insurance proceeds on account of delay, if any, received by the generating company could be retained by the generating company. In the second case the generating company could be given benefit of the additional cost incurred due to time over-run. However, the consumers should get full benefit of the LDs recovered from the contractors/supplied of the generating company and the insurance proceeds, if any, to reduce the capital cost. In the third case the additional cost due to time overrun including the LDs and insurance proceeds could be shared between the generating company and the consumer. It would*



*also be prudent to consider the delay with respect to some benchmarks rather than depending on the provisions of the contract between the generating company and its contractors/suppliers. If the time schedule is taken as per the terms of the contract, this may result in imprudent time schedule not in accordance with good industry practices.*

*7.5 In our opinion, the above principle will be in consonance with the provisions of Section 61(d) of the Act, safeguarding the consumers ' interest and at the same time, ensuring recovery of cost of electricity in a reasonable manner.”*

10. The Commission vide ROP of the hearing dated 14.5.2019 had directed the Petitioner to furnish details of schedule start and schedule completion along with actual start and actual completion date of each activity. The Commission also directed the Petitioner to furnish any other relevant information towards the justification that the time overrun, if any, was not attributable to the Petitioner. The Petitioner in reply dated 10.6.2019 has submitted the scheduled and actual dates with respect to each milestone activity.

11. It is observed that there is a time overrun of 432 days in the COD of Unit-I, 401 days in the COD of Unit-II and 478 days in the COD of Unit-III of the generating station. The Petitioner has accounted the time overrun to the following reasons:

S.No	Reasons	Time Period
1	a. Right of Use clearance for Make-up Water Pipeline	(13 <sup>th</sup> December, 2012 - 29 <sup>th</sup> January, 2015)
	b. Start of Make-up Water System Package	(Schedule - January, 2014 & Actual - March, 2015)
2	Change of Law (ban on Mining etc imposed by Govt.)	(5 <sup>th</sup> August, 2013 - 16 <sup>th</sup> December, 2013)
3	NGT order dated 13.3.2014 for suspension of project works	(13 <sup>th</sup> March, 2014 - 14 <sup>th</sup> April, 2014)
4	Law & Order issues -(Bandhs/ Agitations/Riots etc.,)	(5 <sup>th</sup> July, 2014 - 1 <sup>st</sup> April, 2015)
5	Drought	(March, 2016 -July, 2016)
6	Villagers Resistance - Power Input arrangement For running Design Make-up Water Pump	(August, 2017 - December, 2017)
7	Villagers Resistance - Northern side Railway Siding and Water Reservoir for Lagoon-2	(February, 2018 - September, 2018)





12. Based on the submissions of the parties and the documents available on record, we proceed to examine, on prudence check, the reasons for time overrun of the Project as stated in the subsequent paragraphs.

**Delay due to Right of Use clearance for Makeup Water Pipeline (13<sup>th</sup> December, 2012 - 29<sup>th</sup> January, 2015) and Start of Makeup Water System Package (Schedule - January, 2014 and Actual - March, 2015) in respect of Units-I to III.**

13. The Petitioner has prayed for condonation of delay on the ground that the same was uncontrollable and has submitted the following:-

(i) The request for Right of Use (ROU) corridor for laying Make-up Water lines from Make-up Water Pump House at Almatti back waters to plant reservoir was made by Petitioner to District Administration on 13<sup>th</sup> December, 2012. The issue was discussed in the meeting held on 1.2.2014 in presence of the local MLA for crop compensation. The issue was also discussed on 24.9.2014 in the PMO review of Central Power Projects under the Ministry of Power, GOI.

(ii) For the ROU of Water Pipeline, a 40 metre corridor was required. On request of NTPC for intervention of District Administration, meetings were held with the farmers/owners of land in the presence of the MLA to arrive at a fair and reasonable level of compensation. At the final meeting held by Deputy Commissioner, Vijayapura on 13<sup>th</sup> November, 2014, the farmers demanded ten years of Crop compensation based on the sugarcane yield for Right of Way (RoW) and RoU.

(iii) Order for ROW for 66 kV lines and ROU for Make-up Water lines was issued by Deputy Commissioner, Vijayapura on 29.1.2015 in exercise of his powers under the Electricity Act, 2003 and the Indian Telegraph Act, 1885, for ₹5,80,000/- per acre, which is equivalent to 8 years net yield of sugarcane crop, as one time flat compensation fixed for both RoW and RoU area. The payment disbursement was in two stages, i.e. 65% before start of work and 35% after four months.

(iv) After payment of compensation in line with the Deputy Commissioner's order, the laying of Water pipeline was completed and water was charged to plant reservoir on 4<sup>th</sup> March, 2016.

(v) Delay by the District Administration in giving permission for RoU of Water pipeline, falls under uncontrollable factors. Therefore, the time period of around 25.5 months taken by the Administration for giving clearance had



resulted in the delay in start of erection work for execution of Make-up Water System Package.

(vi) The scheduled start date of the above erection work was from January, 2014 whereas, the same had actually started during March, 2015.

14. Respondent No.5 TANGEDCO vide its reply affidavit dated 28.3.2019 has submitted that the Investment Approval for the Project was accorded and the zero date was fixed as 25.1.2012, whereas, the request for Use of Makeup Water Pipelines was made by the Petitioner only during December, 2012 i.e. after a lapse of 10 months from the zero date. It has, therefore, submitted that the claim of the Petitioner to consider the delay as uncontrollable factor and to condone the delay is not justifiable and, therefore, the same may be rejected.

15. Respondent No.6 BESCO vide its reply affidavit dated 24.4.2019 has submitted that the application should have been made by the Petitioner shortly after the date of Investment Approval, but the Petitioner had applied to the District Administration only on 13<sup>th</sup> December 2012 i.e. almost 11 months after the date of grant of Environment Clearance. The Respondent has submitted that the Petitioner has furnished no reasons for the delay in applying for the Makeup Water pipelines. The Respondent has further submitted that the delay in making the application and the failure to take any proactive steps are clearly attributable to the Petitioner.

16. Respondent No.11 KSEB vide its reply affidavit dated 22.5.2019 has submitted that a considerable delay of 3 years has occurred in getting the RoU clearance for Makeup Water Pipeline and the start of Makeup Water System Package and the same is fully attributable to the Petitioner. Hence, the Respondent has prayed that the time overrun and cost overrun due to delay on this count may not be allowed.



The Respondent while pointing out that the Petitioner had not made proper follow-up in getting the RoU has submitted that the Petitioner had applied to the District Administration almost 11 months after the grant of Environment Clearance and a time period of 2 years from December, 2012 to 2014 was lost due to lack of follow up, after seeking request from the District Administration. The Respondent has submitted that since no proper justification has been furnished by the Petitioner for the long delay in getting the RoU, the claim of the Petitioner to consider the delay as an uncontrollable factor may be rejected.

17. The Petitioner in its rejoinder affidavit dated 1.5.2019 has mainly submitted that the contentions made by the respondent may be rejected since detailed reasons along with documents have been furnished in the Petition. The Petitioner has reiterated that the delay in the project were for reasons beyond the reasonable control of the Petitioner.

18. The submissions have been considered. As stated, the request for ROU corridor for laying make up water lines from Makeup water pump house at Almatti back waters to plant reservoir was made by the Petitioner to the District administration on 13.12.2012. Pursuant to this, the issue of crop compensation was discussed in the meeting dated 1.2.2014 with the local MLA and subsequently was discussed in the PMO review held on 24.9.2014 and thereafter, negotiations were carried out to arrive at a fair and reasonable level of compensation. It is noticed that on 29.1.2015, an amount of ₹5,80,000/- per acre, which was equivalent to 8 years net yield of sugarcane crop as one time flat compensation was fixed for both RoW and RoU area. It is further observed that the final meeting was held on 13.9.2014 in presence of the DC, Vijayapura and order for ROW for 66 KV lines & ROU for Makeup water lines was issued by the DC on 29.1.2015. This has led to the



delay in getting the “Right of Use” clearance for makeup water pipeline from 13.12.2012 to 29.1.2015. On perusal of the documents furnished by the Petitioner, it is observed that the scheduled start date for erection work of Makeup Water Pipeline was January, 2014 and therefore, the claim of the Petitioner for delay from 13.12.2012 is not justifiable. The work of Makeup Water Pipeline was actually started during March, 2015. Accordingly, there is an actual delay of 14 months (January, 2014 to March, 2015) in the schedule start of the makeup water pipeline erection work. It is further observed that the Petitioner had applied for ROU to the District Administration on 13.12.2012 i.e. after a gap of around 10 months from the date of the IA and the meeting on this issue was held only on 1.2.2014 leading to a further delay of 13 months. The Petitioner has not placed on record any material to show that it was pursuing the matter diligently with the local authorities during the intervening period for obtaining the clearances for start of work. It is noticed that the issues were resolved only on 29.1.2015, almost a year from the meeting which was held on 1.2.2014. In our view, there was delay in applying to the district authorities as well as lack of follow-up action on part of the Petitioner. In view of the above discussions, we are of the considered view that the delay in the laying of Makeup Water Line due to ROU issue was for reasons which were not beyond the control of the Petitioner. Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation 7.4 (i))], the delay on this count cannot be condoned. However, the Liquidated Damages (LD) recovered from the contractor and Insurance proceeds if any, received by the generating company, on account of the said delay, could be retained by the generating company.



**Ban imposed by National Green Tribunal (NGT) for sand mining on the river bed causing delay for the period from 5.8.2013 to 16.12.2013 and NGT order dated 13.3.2014 for suspension of project work-causing delay for the period from 13.3.2014 to 14.4.2014**

19. As regards the ban imposed by NGT for sand mining on the river bed, the Petitioner has submitted the following:-

(i) The river bed sand mining for the Project was envisaged from Bheema River in Bijapur District and the tributaries of Krishna River in Bagalkot District. The river bed sand mining was stopped due to the ban imposed by order of NGT dated 5.8.2013 in Application No. 171/2013. The Petitioner has submitted that it made various correspondences with the State and local administration for grant of permission for sand mining for the project construction, but the Petitioner did not get permission for the same.

(ii) The packages which were affected include Site levelling, SG civil works & TG civil works. EC for the Project was accorded by MoE&F, GOI on 25.1.2012 and thereafter the construction activities had started. Subsequent to the NGT order dated 5.8.2013, fresh policy guidelines were issued by the Govt. of Karnataka on 16.12.2013 with regard to Sand mining.

(iii) An appeal (12/2012) was filed by Mr. M.P. Patil before the NGT challenging the EC accorded to the Project on 25.1.2012 by the MOE&F GOI. NGT by order dated 13.3.2014 had ordered the suspension of Project work.

(iv) NGT further directed MoE&F to refer the matter to the Expert Appraisal Committee (EAC) for re-scrutiny, with the entire process to be completed by EAC within six months from the date of order. During this period or until further order was passed by the MoE&F, whichever was earlier, the Project was directed to maintain status quo.

(v) The erection activities at the project stopped immediately after the NGT order. In view of uncertainty in starting the work, the contractor also started to demobilise the manpower.

(vi) Petitioner filed an appeal (C.A. No. 3870/2014) before the Hon'ble Supreme Court and the Court on 1.4.2014 stayed the operation of order of NGT. Accordingly, the work was restarted and the mobilisation of manpower took two weeks' time for execution of the Project works.

20. Respondent No.5 TANGEDCO has submitted that it is the responsibility of the Petitioner to seek necessary approvals/permissions from the concerned authorities



prior to the commencement of any work associated with the Project. It has submitted that the Petitioner had not approached the authorities concerned seeking approvals for sand mining prior to the ban imposed vide NGT order dated 5.8.2013. The Respondent has stated that on account of the fault on the part of the Petitioner to take timely action, the delay due to ban in terms of NGT order would not fall within the provisions of 'Change in Law'. Hence, the Respondent has prayed that the claim of the Petitioner on this ground is not justifiable and is liable to be rejected.

21. Respondent No.6 BESCO and the Respondent No.11 KSEB have submitted that the claim of the Petitioner may be rejected as the NGT had only prohibited the illegal mining of sand and the Petitioner being a responsible Government Company should have ensured that its requirements for sand was met in a manner duly complying with all the applicable laws right from the beginning. The Petitioner in its rejoinder to the replies of the Respondents, TANGEDCO and BESCO have submitted that the contentions made by the Respondents may be rejected as the reasons for delay in the project were beyond reasonable control of the Petitioner.

22. The matter has been examined. As stated, the IA of the Project was accorded on 28.12.2011, subject to EC accorded by MOE&F, GOI. The MOE&F on 25.1.2012 has granted EC for 2440 acres (987.43 hectares) of land for the Project which was valid for a period of 5 years. The construction activities started after grant of EC by MOE&F. It is noticed that in Application No. 171/2013 (NGT Bar Association v MOE&F & ors), the NGT vide order dated 5.8.2013 had held as under:

*"In the meantime, we restrain any person, company, authority to carry out any mining activity or removal of sand from river beds anywhere in the country without obtaining Environment Clearance from MoEF/ SEIAA and license from the competent authorities"*



23. It is observed that pursuant to the above order, the work of transportation of sand to the Project of the Petitioner was stopped. The Petitioner vide its Letters dated 3.9.2013 and 1.10.2013 to the Deputy Commissioner Bagalkot,; Letter dated 11.9.2013 to the Secretary, Mines, Sugar, Textiles & SSI, Govt., of Karnataka,; Letter dated 9.10.2013 to Deputy Commissioner Hospet,; Letter dated 28.10.2013 to Deputy Commissioner Bijapur,; Letter dated 30.10.2013 to the Secretary, Govt. of Karnataka,; Letter dated 8.11.2013 to the Deputy Commissioner, Koppal; and Letter dated 9.11.2013 to the Principal Secretary (Forests, Ecology & Environment), Govt. of Karnataka had requested to accord permission for sand mining. In response to the letter dated 30.10.2013 by the Petitioner, the Government of Karnataka, vide its letter dated 16.12.2013 addressed to the Petitioner, conveyed that allotment of sand mining/quarry blocks for the exclusive use of the Petitioner does not fall within the purview of the Department of Forest, Ecology and Environment and also stated that the Department of Mines and Geology, PWD and the Deputy Commissioner of the concerned districts may be approached in this regard. The Government of Karnataka had further informed that as per EIA Notification, 2006, prior EC is required from SEIAA, Karnataka for mining/quarrying of river sand in an area less than 50 Ha, and EC from the MOE&F, GOI is required for an area of 50 Ha and above. The Petitioner has attributed the delay from 5.8.2013 to 16.12.2013 to the ban on mining imposed by the NGT/GoK. As the site levelling work, SG civil works & TG civil works were affected. The contention of the Respondents that the Petitioner did not have clearance for quarrying the river sand as per EIA Notification, 2006 is incorrect as the Petitioner does not undertake the quarrying of sand from the river-bed. The Petitioner procures sand from mining agencies, dealers and local market. It is these mining agencies who are required to obtain clearances for land mining. The ban on mining



has, therefore, resulted in shortage of sand which in turn has affected the civil works of the Project. It is observed that consequent upon the NGT order, the Petitioner had vide its letters made several correspondences to the local authorities and the GoK, thereby taking active steps for restoration of the supply of sand as the civil works of the project were getting affected/delayed. In our view, the Petitioner has taken all reasonable measures to mitigate the delay and for restoration of the sand supply. Accordingly, we hold that the delay is not attributable to the Petitioner and accordingly, the delay on this count is condoned. Further, the Petitioner has prayed for condonation of delay for the period from 13.3.2014 to 14.4.2014 on account of delay due to NGT order as regards EC granted to the Petitioner. As stated, the EC granted by MOE&F on 25.1.2012 for the Project was challenged before the NGT in Appeal No.12/2012 and the NGT vide its order dated 13.3.2014 had remanded the matter to MoE&F, GOI with direction to MOE&F to refer the matter to Expert Appraisal Committee for re-examination. Till then, the EC dated 25.1.2012 was directed to be kept in abeyance. As a result of this, the erection activities at the Project were stopped and manpower was demobilised. Only after the Hon'ble Supreme Court stayed the order of the NGT dated 13.3.2014 that the work could begin. The Petitioner has submitted that it took about two weeks for the Petitioner to mobilise the manpower, which was demobilised after the NGT order, and start the works from 14.4.2014. In view of this, we hold that delay on account of NGT order and the consequent demobilisation of manpower from the Project till the re-mobilisation which had caused a complete standstill in the works of the Project is beyond the control of the Petitioner. Accordingly, in terms of the principles laid down by the Tribunal in its judgment dated 27.4.2011 [(situation (ii) above)], the delay of 133 days from 5.8.2013 to 16.12.2013 due to ban on mining and the delay of 32 days from





13.3.2014 to 14.4.2014 due to NGT order for suspension of work, cannot be attributable to the Petitioner. However, the LD recovered from the contractor and the insurance proceeds, if any, would be considered for reduction of capital cost.

### **Law and Order (Bandhs/Agitations/Riots etc)**

24. As regards Law and Order, the Petitioner has submitted the following:

(i) On 5.7.2014, there was agitation at Project surroundings resulting in mob arson & violence at labour colonies which had caused exodus of workforce from site.

(ii) Subsequent to stay on NGT order (related to grant of EC) by the Hon'ble Supreme Court, an organisation namely 'Uttara Kannada Jana Hagu Parisara Rakshan Samithi' (UKJHPRS) gave representations to various authorities, including the Chief Minister of Karnataka, against the project. It also indulged in negative publicity with the aim of creating apprehensions in the minds of local villagers against the Project. The tactics included morphing of images & presenting pictures of health risks.

(iii) An unauthorised meeting was organised by the said organisation (UKJHPRS) on 5.7.2014 at the entrance to the Project wherein, the mob turned violent and indulged in arson, setting fire to the labour colony rooms including its efforts to enter plant premises. After lathi charge and tear gas shelling failed to control the mob, the police had to resort to firing, resulting in injury to farmers. This issue was taken up by Karnataka Rajya Raitha Sangha (farmers' association) by organising public meetings near the plant on 21.7.2014 supported by 'La Via Campesina South Asia' on 5.8.2014 and Rail roko on 12.8.2014.

(iv) The Petitioner took steps for restoration of harmony and to get the working conditions back to normal by (i) creating awareness amongst local people on the benefit of the Project to the community; (ii) engaging in dialogue with agitators by visit to their tents with local MLA; and (iii) sending letters to all MP's, MLA's and MLC's by the competent authorities of the Petitioner, reflecting the commitment of the Petitioner to environment preservation and explaining the benefits of project.

(v) On 26.8.2014, Karnataka Rajya Raitha Sangha organised a procession in Bijapur and in subsequent meeting with DC, demanded that the Petitioner should file affidavit before the Hon'ble Supreme Court that there will not be any harmful effect from the Project. The Petitioner reaffirmed its commitment and filed affidavit before the Court on 4.9.2014 indicating that



the operation of plant would be in conformity with all applicable environmental laws.

(vi) A meeting was held on 6.9.2014 with the Energy Minister of the State Govt. of Karnataka to ensure the withdrawal of agitation. However, the farmers' association did not withdraw their agitation. The agitating leaders were engaged through back channels using the services of PR consultant and through series of meetings by DC-Bijapur.

(vii) The agitation which started on 5.7.2014 was finally withdrawn on 1.4.2015. During the period of 199 days, the entire progress of the project was severely hampered due to non-availability of man power.

Accordingly, the Petitioner has prayed that the delay may be condoned as the circumstances were beyond the control of the Petitioner.

25. The Respondent No.5 TANGEDCO has submitted that it is the responsibility of the Petitioner to overcome the issues associated with the project and to commission the project before the timeline and hence the delay may not be condoned.

26. Respondent No.6 BESCO has submitted that the SCOD of the Project was in April 2016, which indicates that most of the equipment ought to have been transported to the site and should have been within the Project premises by the time the agitations started. It has also submitted that the Petitioner has not furnished any documents/material to show that there was stoppage of works during the period from 6.7.2014 to 1.4.2015. The Respondent has further submitted that it was the responsibility of the Petitioner to overcome the issues associated with the completion of the Project and to commission the project as per the timeline specified. Similar submissions have been made by the Respondent No.11 KSEB. It has however added that the impediments to transportation of equipment, men and materials for the project were not reported during the above period.



27. We have examined the matter. The Petitioner has attributed the delay of 240 days from 5.7.2014 to 1.4.2015 to Bandhs/Agitation and Riots by organisation viz. UKJHPRS and the farmer association. However, it is noticed from the submissions of the Petitioner that the laying of Makeup Water Pipelines was being carried out from March, 2015 onwards. Further, from the milestone activities furnished by the Petitioner, it is noticed that the work of Boiler hydro test for Unit-I and TG Erection start of Unit-II was carried out on 31.1.2015 and 30.3.2015 respectively. All these activities were carried out by the Petitioner during the period covered by bandhs/agitation. Moreover, from the submissions of the Petitioner in the Civil Appeal No. 3870 of 2014 filed by the Petitioner before the Hon'ble Supreme Court, it is observed that normalcy was restored in the Project site on 25.8.2014. It was also submitted by the Petitioner in the said appeal that 65% of the original deployed work force was remobilized and the activities on all fronts were commenced. In view of this, we are not inclined to condone the delay except from 5.7.2014 till 25.8.2014. Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation (ii))], the total delay of 51 days from 5.7.2014 to 25.8.2014 is condoned for all the three units of the generating station. However, the LD recovered from the contractor and the insurance proceeds, if any, would be considered for reduction of capital cost.

### **Drought**

28. The Petitioner has prayed for time overrun due to drought situation in Bijapur district and has made the following submissions:

- (i) There was drought in Bijapur district due to low annual rainfall during 2015 (for rabi season rainfall is about 1/3 rd of average annual rainfall) and consequently low reservoir levels at Almatti Dam. A restriction for drawl of water was declared by the District administration in the month of February, 2016.



(ii) State of Karnataka has faced drought for the third consecutive year and it was worst in about four decades. The northern districts such as Raichur, Kalburgi, Bijapur and Bidar were among the most drought affected districts. The Almatti dam, which stores water from the river Krishna, was seeing 'dead storage' at only 10% of its capacity of 124 tmcft at the start of summer season of 2016. The district administration had barred drawing of water for farming and industries on 13.2.2016.

(iii) Due to ban imposed on water drawl for industrial purposes, special permission for reduced water drawl of 0.05 tmc, against the requirement of 0.3 tmc was taken, thereby constraining the plant capabilities for commissioning. In future, water could only be drawn after MDL levels of Almatti reached at 506.87 tmcft water level. As on 28<sup>th</sup> June, 2016 level was only 505.54 tmcft.

(iv) For the purpose of pre-commissioning and initial operation, 0.3 tmc of water was required from the middle of January,2016 up to May,2016. The Petitioner had requested Krishna Bhagya Jala Nigam Limited (KBJNL) to allocate the necessary quantity so that water drawl could be started. KBJNL on 16.2.2016 permitted Petitioner to draw 0.3 tmc of water subject to some conditions. One such condition was the formal clearance of the Deputy Commissioner, Vijayapura and Regional Commissioner, Belgavi prior to the commencement of water drawl.

(v) The Office of Regional Commissioner, Belagaum issued order on 2.3.2016 in granting permission to the Petitioner to lift water for 30 days, limited to 0.05 tmc. Thus, the commissioning and erection activities were severely impacted due to non-availability of water.

Accordingly, the Petitioner has submitted that the delay on this count may be condoned.

29. The Respondent No.5 TANGEDCO has submitted that the pre-commissioning activities have to be completed within six months before the date of anticipated COD of the units. It has pointed out that the period of requirement of water as indicated by the Petitioner is for a period between January 2016 and May 2016 which is almost a year prior to the anticipated COD of Unit-I. Therefore, the delay in getting the required quantum of water will not have any impact on the pre-commissioning activities. Accordingly, the Respondent has submitted that the



claim of the Petitioner for condonation of delay on this ground is not justifiable and may be rejected.

30. Respondent No.6 BESCO has submitted that the pre-commissioning activities were being carried on by the Petitioner between the period from January 2016 to May 2016 and the SCOD of Unit I was in April,2016. It has submitted that if the Petitioner had complied with the original commissioning schedule, the restrictions on water drawl, which arose in February 2016, would have had no or minimal impact on the pre-commissioning activities, since, the pre-commissioning activities would have been substantially completed by that time. Accordingly, the Respondent has submitted that the claim of the Petitioner for condonation of delay may be rejected. Similar submissions have been made by the Respondent No.11 KSEB. It has also submitted that the claim of the Petitioner may be rejected as the arrangements for water and other amenities for construction of the project are attributable to the Petitioner in terms of the Regulations in force.

31. We have examined the matter. The Petitioner has attributed the delay due to drought situation for the period from March, 2016 to July,2016 to the low annual rainfall during 2015 and has submitted that due to unavailability of water, the commissioning and erection activities of the project were affected. In support of the same, the Petitioner has furnished the newspaper clippings for the period from February, 2016 to May, 2016 with regard to the barring of river water from the Krishna and Bhima Rivers, scarcity of water and drought situation in the State of Karnataka. It is noticed from the details of the milestone activities furnished by the Petitioner, that the work of TG Erection and Boiler erection of all the three units were completed by the year 2015 and the Commissioning activities were scheduled to be on January, 2016 for Unit-I, July, 2016 for Unit-II and January,



2017 for Unit-III. However, the commissioning activities of Units-I, II and III were actually completed during December, 2016, May, 2017 and March, 2018 respectively. Since, the scheduled commissioning of Unit-III was January, 2017, due to drought the activities of schedule completion of commissioning activities of only Unit-I and Unit-II were affected. The Petitioner had completed the Boiler light up of Unit-I on 20.12.2015. It is observed that the Petitioner vide its letter dated 1.1.2016 had requested the Managing Director, Krishna Bhagya Jal Nigam Limited (KBJNL) to allocate the necessary quantum of water so that the water drawl can be started from the 3<sup>rd</sup> week of January,2016, as the first unit was targeted to be commissioned by March,2016. In response to this request, KBJNL vide its letter dated 16.2.2016 had permitted the Petitioner to draw the required quantum of water (0.3 TMC) subject to clearance from Deputy Commissioner, Vijayapura.

32. As stated earlier, the Petitioner required 0.3 tmc of water for the pre-commissioning activities for the period from January, 2016 to May, 2016. It is noticed from records that the District administration on 13.2.2016 had barred the drawing of water for farming and industries due to less storage of water in the Almatti dam. The Petitioner, on 26.2.2016, had requested the office of Regional Commissioner for lifting of water for the Project and in response, the Regional Commissioner, Belgaum, on 2.3.2016, had allowed the lifting of only 20 cusecs of water per day for 30 days (i.e. 0.05 tmc). However, the Petitioner started drawing of water from 4.3.2016 and could only draw about 0.02 tmc of water till 29.3.2016, due to problems in the pumping system established for drawing water. However, the Petitioner has not clarified the status after 29.3.2016 (25 days after it started drawing water from 4.3.2016) with regard to its requirement for water, its availability, and to when it was allowed to draw the normal requirement of



water. It appears from the claim of the Petitioner that the position with respect to water availability had improved after July, 2016. From the bar chart for Unit-I, it is observed that with the available water drawl, the Petitioner could achieve the 'Steam blowing completion' on 12.6.2016, thereby indicating that sufficient water was available. As such, in the absence of any clear details/position with regard to the availability of water vis-a-vis its requirement, we are of the view that the delay due to drought, which is a force majeure event, was beyond the control of the Petitioner for the period from 15.1.2016 to 3.3.2016 (i.e. the date from which the Petitioner requested for allocation of quantum of water to a date prior to the date on which it started to draw the water) and accordingly, the delay on this count is condoned. Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation (ii))], the total delay from 15.1.2016 to 3.3.2016 is condoned. However, the LD recovered from the contractor and the insurance proceeds, if any, would be considered for reduction of capital cost.

**Resistance by villagers/landowners-Power Input arrangement for running Design Make Up Water Pump**

33. The Petitioner, in the main petition, has claimed time overrun for the period from August,2017 to December,2017 on account of the delay in power input arrangement for running Design Make Up Water Pumps due to resistance by Villagers. However, it is noticed from the affidavit dated 10.6.2019 submitted by the Petitioner that the Petitioner has claimed delay of 3 months on account of villagers resistance between full load commissioning to COD of Unit-I. Further, the Petitioner has submitted that following steps were taken to expedite the arrangement of power at Makeup Water Pump House, for running design make up water pumps:



(i) The transmission line work for power input to make-up water pump house envisaged through 66 kV line from the generating station could not be taken up due to villagers' resistance despite having ROU and ROW clearances.

(ii) This issue was taken up in the meeting of the 14<sup>th</sup> Cabinet Committee of Infrastructure (CCI) -Project Monitoring Group (PMG), reviewed by the Chief Secretary, Govt. of Karnataka. In the said meeting, it was pointed out that the resistance by the Villagers'/Landowners for tower construction was yet to be addressed. The situation further worsened with the onset of monsoon and the start of sowing season.

(iii) As a contingency measure, the Petitioner approached the discoms, namely Hubli Electricity Supply Company Ltd. (HESCOM) for providing temporary 7.5 MVA power connection at Almatti pump house from its network. However, the enablement of this power supply required augmentation of KPTCL sub-station at Nidugundi by way of establishment of 110/33 KV transformer and 33KV bay. This augmentation work had to be done on 'deposit work basis' for which the estimates were received from KPTCL. The approval for providing power connection was accorded by the Power Sanction Committee of Karnataka Power Transmission Corporation Ltd (KPTCL) on 17.6.2017.

(iv) The Petitioner was unable to envisage the delay in the power input for Makeup Water Pump House which was for the reasons stated above. The details of the same have also been furnished by the Petitioner in Petition No.172/MP/2017 and 260/MP/2017 filed before this Commission, wherein the Commission vide its orders dated 18.8.2017 and 29.12.2017 respectively, had allowed the extension for interchange of infirm power into the grid for commissioning tests including full load test of Unit-II or the actual date of commercial operation, whichever was earlier.

34. Respondent No.5 TANGEDCO has submitted that the Petitioner is not a new entrant in the field of execution of generation projects and all the necessary arrangements required for successful commissioning of the project has to be taken in advance. Accordingly, the Respondent has submitted that the Commission may reject all the above issues, as the Petitioner should have done proper planning in getting all necessary clearances and arrangements.

35. Respondent No.6 BESCOM has submitted that as per the RoW issued by the Deputy Commissioner, Vijayapura on 29.1.2015, the 40 meters corridor width was





used for laying underground water pipelines (ROU) and for erection of electric towers with transmission line (ROW). It has, therefore, submitted that the same corridor was being used for setting up transmission lines for supplying power from the Plant to the Makeup Water Pump House and for laying of pipelines from the Makeup Water Pump House to the Plant. The Respondent has pointed out that when the work for laying of pipelines was completed in March 2016, there was no occasion to delay the setting up of the transmission lines. The Respondent has also submitted that the claim of the Petitioner for condonation of delay from April 17 to December 17, is in any case beyond the SCOD of all units of the Project and therefore no condonation of delay is possible.

36. Respondent No.11 KSEB has submitted that the claim of the Petitioner is baseless as any resistance by the villagers hindering the execution of work can be effectively handled with the help of the District Administration. It is submitted that the Petitioner ought to have taken proper steps in this regard and, therefore, the prayer of the Petitioner may be rejected.

37. We have examined the submissions of the parties and the documents available on record. The date of "Commissioning at full load" as per original schedule of Unit-I was 31.1.2016 and date of scheduled COD is 25.5.2016. However, the actual date of "Commissioning at full load" of unit-I was 25.12.2016 and actual date of commercial operation was 31.7.2017. Accordingly, the actual time taken for completion of the activities from full load commissioning to COD is seven months and six days in place of original schedule of four months. The Petitioner vide affidavit dated 10.6.2019 w.r.t delay of Unit-I has attributed the said delay to villagers resistance due to which power input arrangement for running make up water pump could not be put into place. Further, it is observed



that Petitioner in the Petition has also furnished the proceedings of the 14<sup>th</sup> CCI-PMG meeting held on 18.5.2017 under the chairmanship of Chief Secretary, Government of Karnataka, in which it is mentioned that construction of 66 KV Transmission Towers in ROU/ROW was hindered due to resistance from the villagers. Despite having received the clearance for ROU/ ROW from Govt. of Karnataka, the Petitioner could not take up the work of Transmission line due to villagers resistance. Finally, the Petitioner came up with alternate arrangement which was also approved by Power sanction committee of KPTCL on 17.6.2017. After the availability of power supply from alternate arrangement the Petitioner could declare the COD of Unit-I on 31.7.2017.

38. It is observed that the actual date of full load commissioning of Unit-I was 25.12.2016 and considering the original schedule of 4 months from full load commissioning to COD, the Petitioner should have declared COD by 25.4.2017. However, by this date, even the alternate arrangement of power for running was not in place. The Petitioner could only declare the COD on 31.7.2017 after it could arrange the power from KPTCL on 17.6.2017. In light of above facts, it is evident that the Petitioner was taking all possible steps to mitigate the delay caused by villager's resistance. Hence, we are of the view that the delay of 97 days i.e. from 25.4.2017 to 30.7.2017 in achieving COD of unit-I due to villagers' resistance was an uncontrollable factor. Accordingly, the corresponding delay of 97 days is condoned. However, the LD recovered from the contractor and the insurance proceeds, if any, would be considered for reduction of capital cost.

39. Further, the full load commissioning of Unit-II was carried out on 23.3.2017 against the original schedule of 31.7.2016. There was a schedule of 4 months from "commissioning at full load" to COD of Unit-II. However, the Petitioner has taken 9



month and 8 days to declare the COD of Unit-II i.e. 31.12.2017 and the Petitioner has attributed the said delay to villagers' resistance.

40. As mentioned above, due to continued resistance by the Villagers, the Petitioner had come up with an alternate arrangement of power supply for Makeup Water Pumping System from the discoms viz., HESCOM/KPTCL, which was approved on 17.6.2017. Considering the fact that the Petitioner has taken 9 months and 8 days to carry out the activity from "commissioning at full load" to COD of Unit-II, against the schedule of 4 months, there is an effective delay of 5 months and 8 days up to 31.12.2017 i.e. COD of Unit-II. Since, the Petitioner has carried out commissioning at full load of Unit-II on 23.3.2017 and the power input was available on 17.6.2017, the said delay of 85 days from 24.3.2017 to 16.6.2017 is condoned and the Petitioner is given the benefit of the additional cost incurred due to time overrun. However, the LD recovered from the contractor and the insurance proceeds, if any, would be considered for reduction of capital cost. Out of 5 months and 8 days delay, the period from 24.3.2017 to 16.6.2017 is condoned and the balance period of 2 months (approx.) is not condoned. Therefore, the increase in cost on account of the said delay of 2 months has to be borne by the Petitioner. However, the Liquidated Damages (LD) and Insurance proceeds if any, received by the generating company, on account of the said delay, could be retained by the generating company.

**Resistance by Villagers-Northern side Railway Siding and Water Reservoir for Lagoon-2**

41. In respect of Unit-III of the Project, the Petitioner has claimed time overrun for the period from February, 2018 to September, 2018 on account of the delay caused by resistance by Villagers to the work of Railway Siding and Water Reservoir. The Petitioner has submitted that though Unit-III of the Project was test



synchronized on 22.8.2017, the completion works/activities got severely affected after the synchronization, due to the following reasons:

(i) The Railway siding of the Project was connected only from one side i.e. from Southern side to South Western line against the design connection bulb on both sides (Southern and Northern). With one side connectivity of the siding, a maximum of 6-7 rakes/day could be reached to the plant, with which the coal requirement of only two units operation could be facilitated. To enable the rake movement up to the level of 9-11 rakes/day, required to run all three units on a sustainable basis after the commercial operation, the completion of northern side bulb of railway siding was essential.

(ii) The works of Northern side Railway Siding bulb were constrained by the delays in land acquisition. The land acquisition in respect of the Project was carried out by Karnataka Industrial Area Development Board (KIADB), a Govt. of Karnataka Undertaking, which looks after the industrial area development in the State of Karnataka.

(iii) The land acquisition requirement for the railway siding (both sides) was made by Petitioner on 8.12.2012. Though the works on the Northern Siding bulb had started, the same were on a standstill due to resistance from Villagers. Subsequent to the availability of encumbrance free land (anticipated in February, 2018), the construction of one Road over Bridge (RoB) and one Road under Bridge (RuB) on the northern side Railway Siding line was also to be taken up.

(iv) Besides the availability of Railway Siding land, the physical possession of land for Water Reservoir for Lagoon-2 was also delayed due to resistance from villagers and pending payments from KIADB. The part possession of the land was completed during the first week of January, 2018 after continued persuasion with the State Govt. and works were restarted. The reservoir of Lagoon-1 was under operation which could suffice for sustainable operation of only two units.

(v) For continuous running of three units during the summer months, wherein the water drawal was restricted by certain agreement conditions, the water storage capacity wouldn't be sufficient enough without Lagoon-2.

(vi) Though, the northern bulb Railway siding and Water Reservoir for Lagoon-2 were still a constraint, based on the indication from South Western Railways for augmented supply of coal rakes and with the expected onset of monsoon in June, 2018, in line with the water agreement conditions, the Petitioner had declared the COD of Unit-III w.e.f. 00:00 hrs of 15.9.2018.



(vii) This delay has also been condoned by the Commission in its Order dated 23.2.2018 in Petition No. 51/MP/2018 and Order dated 1.6.2018 in Petition No.146/MP/2018, wherein extension of time for interchange of power with the grid was permitted.

42. Respondent TANGEDCO has submitted that all necessary arrangements required for successful commissioning of the Project has to be taken in advance as all the activities which form part and parcel of execution of a Project are overlapping in nature. It has also submitted that instead of taking a proactive stand in settling all issues related to commissioning, the Petitioner has involved in blame game and has sought extension of time and condonation of delay by citing trivial issues. Accordingly, it has prayed that the Commission may reject the claim of the Petitioner.

43. Respondent No.6 BESCO has submitted that despite the SCOD for the Units falling in 2017, the Petitioner had not taken any steps prior to March, 2016 for expediting the land acquisition process for the Railway Siding. It has also submitted that the Petitioner being the most experienced entity in the nation with regard to execution of thermal power projects, ought to be aware of the time taken and the hurdles faced in the setting up of a thermal power project. The Respondent has stated that proactive steps for avoidance of delay need to be taken by the Petitioner in order to be able to make out a case for condonation of delay, but the Petitioner has failed to take any proactive action. The Respondent has accordingly submitted that the delay on this account from February 2018 to September 2018, which period is in any case beyond the SCOD of all units of the Project, may not be condoned as Petitioner has not made out any case for condonation of delay.



44. Respondent No.11 KSEB has submitted that the claim of the Petitioner is baseless as any resistance by the villagers hindering the execution of work can be effectively handled with the help of the District Administration. It has submitted that the Petitioner ought to have taken proper steps in this regard and therefore, the prayer of the Petitioner may be rejected.

45. We have considered the submissions. The generating station was connected only from one side i.e. from Southern side to South Western line against the design connection bulb on both sides (Southern and Northern) for transportation of coal. A maximum of 6 to 7 rakes per day was possible with the one side connectivity of the siding, with which the coal requirement of only two units operation was possible. To cater the requirement of coal in all the three units 9 to 11 rakes per day is required for the generating station. Hence, the works of Northern side railway siding bulb was required which was constrained by the delays in land acquisition. Besides the availability of Railway siding land, the physical possession of land for water reservoir for Lagoon-2 was also delayed due to villagers' resistance. The reservoir of Lagoon-1 was under operation which could cater to the requirement of only two units of the generating station. As per submissions of the Petitioner, the Scheduled COD of Unit-III of the generating station was 30.5.2017 (considered as 25.5.2017) and the actual COD of the Unit-III of the generating station is 15.9.2018. The Petitioner has attributed the delay from February, 2018 to September, 2018 due to Villagers resistance for possession of land for transportation of coal from the Northern side and Reservoir for Lagoon-2. Land acquisition at the Project was carried out by KIADB, which looks after industrial area development in the State of Karnataka. The Petitioner has made up the land acquisition requirement for the Railway Siding (both sides) on 8.12.2012. However,



KIADB did not complete the payment disbursement for the above land and had not provided the possession letter to the Petitioner. It could not be inferred from the submissions of the Petitioner that during the intervening period of around 4 years, between 8.12.2012 (i.e. date on which land requirement request was made by the Petitioner) and 3.1.2016 (first letter to KIDAB for land acquisition issue for Railway Siding) the Petitioner had taken up the matter with the concerned authorities of the Central Govt. and the State Govt. (MOP, GOI and GoK) to persuade KIDAB to release the payment to the Villagers/Land owners. Hence, the delay for the period from 13.3.2018 to 15.9.2018 cannot be said to be beyond the control of Petitioner.

46. The Petitioner has placed reliance on the decision of the Commission in its Order dated 23.2.2018 in Petition No. 51/MP/2018 and Order dated 1.6.2018 in Petition No.146/MP/2018 to contend that the Commission had allowed extension of time period for injection of infirm power into grid. In our view, the reliance placed on the aforesaid orders would not be of any help to the Petitioner's claim for condonation of delay. It is observed that in the aforesaid Petitions filed by the Petitioner, the Commission had vide its orders allowed the injection of infirm power into the grid for commissioning tests, including full load test of Unit-III upto 31.5.2018/31.8.2018 or the actual date of commercial operation, whichever was earlier. It was, however, clarified in the said orders that the extension of time shall not automatically entitle the Petitioner for IDC/IEDC for delay in declaration of COD and that the same would be considered on merits at the time of determination of tariff. The relevant portion of the order is extracted hereunder:

*"It is clarified that the extension of time as allowed in this order shall not automatically entitle the Petitioner for IDC/IEDC for delay in declaration of COD which shall be considered on merit at the time of determination of tariff of the unit/generating station."*



47. Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation 7.4 (i))], the delay for the period from 13.3.2018 to 15.9.2018 cannot be said to be beyond the control of Petitioner and hence not condoned. However, the Liquidated Damages (LD) received from the contractor and insurance proceeds, if any, received by the Petitioner, on account of the said delay, could be retained by the Petitioner.

48. To summarise, the period of delay condoned in terms of the above discussions are 133 days for the period from 5.8.2013 to 16.12.2013 due to ban on mining imposed by the Govt, 32 days for the period from 13.3.2014 to 13.4.2014 due to NGT order for suspension of project work; 51 days for the period from 5.7.2014 to 24.8.2014 due to Law & Order issues; 49 days for the period from 15.1.2016 to 3.3.2016 on account of Drought situation; and 97 days for Unit-I from 25.4.2017 to 30.7.2017 & 85 days for Unit-II from 24.3.2017 to 16.6.2017 on account of villagers resistance in power input arrangement for running Design Make Up Water Pumps. Based on the above decisions, we analyse below the impact of the reasons of delay as on COD of the individual units.

#### **Unit I-Milestone wise analysis of Time overrun**

49. The SCOD of Unit-I of the Project is 25.5.2016. The details furnished by the Petitioner in respect of time overrun for Unit-I of the Project are as stated in the page below:





Task	Milestone	Scheduled Start Date	Scheduled Completion Date	Actual Start date	Actual Completion date	Schedule Duration (month)	Actual Duration (month)	Delay (month)	Reasons of delay with individual delay (Start and End date)
A	Zero Date of the Station/ start date of Unit-I	25.1.2012	25.1.2012	25.1.2012	25.1.2012	0	0	0	
B	Boiler Erection Start	31.3.2013	31.3.2013	4.5.2013	4.5.2013	14	15	1	1. ROU for Makeup water pipeline was received from the District Administration on 29.01.2015 for the appeal done from NTPC on 13.12.2012. 2. Shri M. P. Patil filed Appeal No. 12/2012 on 22.02.2012 in National Green Tribunal (NGT) against Union of India (through MOEF) challenging the accord of Environmental Clearance for Kudgi STPP.
C	TG Erection Start	31.5.2014	31.5.2014	21.6.2014	21.6.2014	28	28	0.7	3. Status quo order on project activities received from NGT Delhi on 13.03.2014, which was subsequently lifted by the Honble Supreme Court on 01.04.2014 4. On 5th July'14 an unauthorised meeting is organised by an organisation named "Uttara Kannada Jana Hagu Parissra Rakshan Samiti" at the entrance to plant where the mob turned violent and indulged in arson setting fire to labour colony rooms and tried to enter plant premises. After lathi Charge and tear gas shelling failed to control the mob, police as a last resort had to resort to firing in which two persons were injured. As a result of the environment of threat created by arsonists, mass exodus of labour occurred from Site. With the support of state administration labour strength was restored only from mid-August'2014
D	Boiler Hydro test	30.9.2014	30.9.2014	31.1.2015	31.1.2015	32	36	4	5. NGT order issued on 05.08.2013 for ban on sand mining.
E	Boiler Light up	30.6.2015	30.6.2015	20.12.2015	20.12.2015	41	46	5	Time period of around 25.5 months taken by administration for giving clearance resulted in delay in start of erection work for execution of Makeup water system package. Scheduled start date for erection work was Jan 2014 which actually started in March 2015.
F	TG Box up	30.4.2015	30.4.2015	24.4.2015	24.5.2015	39	38	-	
G	TG Oil flushing completion	30.6.2015	30.6.2015	30.6.2015	30.6.2015	41	41	0	



H	Steam Blowing completion	30.9.2015	30.9.2015	12.6.2016	12.6.2016	44	52	8	An order was issued by district administration on 12.02.2016 barring drawing of water from either Krishna or Bhima river as a precautionary measure to save water for summer. Permission for drawing min amount of water i.e. 0.05 TMC issued by Regional Commissioner, Belagavi on 02.03.2016 for a period of 30 days. Water drawing from Almatti reservoir started only from 4.3.2016.
I	Unit Synchronization	30.11.2015	30.11.2015	28.11.2016	28.11.2016	46	58	12	
J	Commissioning/ Full load	31.1.2016	31.1.2016	25.12.2016	25.12.2016	48	59	11	
K	COD	31.5.2016	31.5.2016	31.7.2017	31.7.2017	52	66	14	Villagers Resistance - Power input arrangements for running make up water pump at the pump house. The details of the same have also been given in PetitionNo.102/MP/2017. The Commission has allowed the extension based on bonafide reasons for interchange of power with the grid in petition 102/MP/2017 vide order dated 30.5.2017.

50. It is observed that the activity of 'Boiler Erection Start' which was scheduled to commence from 31.3.2013 had commenced on 4.5.2013, with a delay of 34 days. The reasons furnished by the Petitioner against this activity as above do not justify the delay. As stated, one Mr. Patil had filed appeal before NGT against the grant of EC to the Project and NGT vide its order dated 13.3.2014 had stopped all Project activities. As such, there was no impact on the milestone activity of "Boiler Erection Start". In the absence of justification, the delay of 34 as claimed by the Petitioner cannot be condoned. Similarly, the 'T.G. Erection Start' got delayed by 21 days, but on overall basis the 'Turbine Generator Package' had been completed on time, with the completion of the last activity i.e. 'TG Oil flushing completion'. In other words, the scheduled and the actual completion dates were the same i.e. 30.6.2015. The delay in achieving COD has occurred from the Boiler Package side.



51. The next activity was the Boiler Hydro Test with a completion schedule of 32 months from the 'Zero date', which took around 36 months from the Zero date. As such, there is a delay of 4 months (123 days). From the justifications furnished by the Petitioner, it is noticed that (i) the order of NGT had affected the progress of the work from 13.3.2014 to 13.4.2014 (32 days); (ii) Mob violence affected the progress of the work from 5.7.2014 to 24.8.2014 (51 days); and (iii) ban on mining affected the work from 5.8.2013 to 16.12.2013 (133 days). We have in this order held that the delays caused on account of the NGT orders and mob violence was beyond the control of the Petitioner. The Petitioner had also made several correspondences with the various Mining authorities and the Govt. of Karnataka and had requested them for restoring the availability of sand. In this background, the delay of 123 days up to actual date of Hydro test i.e. 31.1.2015 has been condoned. This delay subsumes the delay of 34 days in the start of Boiler.

52. In respect of 'Boiler Light up', the Petitioner has claimed a time overrun of 173 days i.e. 50 days more than the activity of 'Boiler Hydro Test' for which the delay of 123 days had already been condoned. The reason for this delay as furnished by the Petitioner is the late clearance given by the administration which had resulted in the delay in start of erection work for Makeup Water System Package. The scheduled start date for erection work as mentioned is January, 2014 and the same had actually commenced in March 2015. We have in this order in para 18 above has decided that the delay on this count was not beyond the control of the Petitioner. Accordingly, only the delay of only 123 days till 'Boiler Light up', is allowed against the total delay of 173 days.

53. The activity of 'Steam Blowing completion' was scheduled for 30.9.2015 and the same got completed on 12.6.2016. The Petitioner has attributed the delay due



to 'Drought' on account of low reservoir level. It is observed that there was restriction on the Water drawl by the District Administration and the Petitioner was not permitted to draw the required quantum of water from the Almatti Dam. As decided in para 32 above, the delay of 49 days (from 15.1.2016 to 3.3.2016) has been condoned. Accordingly, the total delay allowed till this activity is 172 days (123+49).

54. As regards the activity of 'Unit Synchronization', it is noticed that the Petitioner had taken around 6 (six) months against the two months' time scheduled after the 'Steam Blowing completion' activity. The Petitioner has attributed the delay to 'Drought' wherein it was not permitted to draw the required quantum of water. However, as decided in para 32 above, the delay on account of Drought is 49 days and the same had already been condoned as above. Accordingly, the delay for a further period (beyond the period of 172 days) since the last activity has not been condoned.

55. The activity of 'Commissioning at full load' was achieved in one month (approx.) against the scheduled time period of two months after 'Unit Synchronisation'. It is observed that after the commissioning of the unit, the Petitioner had taken around 7 (seven) months in the declaration of COD against the scheduled time period of 4 (four) months. The reason as attributed by the Petitioner for such additional time is the 'Villagers resistance' on account of which the power input arrangements for running Make up Water Pump at the pump house had got delayed. It is noticed from the Petitioner's earlier submissions in the main petition that the delay claimed on this count starts from August, 2017. However, Unit-I had achieved COD on 31.7.2017 i.e. before the date from which the impact of Villagers resistance was claimed. In paras 37 & 38 above, we have condoned the



delay of 97 days from 26.4.2017 to 30.7.2017 due to Villagers' resistance. Accordingly, the total time overrun of 269 days (172+97 days) till COD of Unit-I has only been condoned as against the total delay of 432 days.

**Unit II-Mile stone wise analysis of Time overrun:**

56. The details furnished by the Petitioner in respect of time overrun for Unit-II of the Project are as under:

Task	Milestones	Schedule Start Date	Schedule Completion Date	Actual Start date	Actual Completion date	Schedule Duration (month)	Actual Duration (month)	Delay (Days/month)	Reasons of delay with individual delay (Start and End date)
A	Scheduled Start Date (i.e. Zero Date + 6 months)	25-Jul-2012	25-Jul-2012	25-Jul-2012	25-Jul-2012	0	0	0	The reasons are same as that of Unit-I as the zero date of the subsequent units were at an interval of 6 months thereafter (i.e. 6 months after 25.01.2012).
B	Boiler Erection Start	30-Sep-2013	30-Sep-2013	16-Sep-2013	16-Sep-2013	14	13	0	
C	TG Erection Start	30-Nov-2014	30-Nov-2014	30-Mar-2015	30-Mar-2015	28	32	4	
D	Boiler Hydro test	30-Mar-2015	30-Mar-2015	31-Aug-2015	31-Aug-2015	32	37	5	
E	Boiler Light up	30-Dec-2015	30-Dec-2015	31-Oct-2016	31-Oct-2016	41	51	10	
F	TG Box up	30-Oct-2015	30-Oct-2015	25-Feb-2016	25-Feb-2016	39	43	4	
G	TG Oil flushing completion	30-Dec-2015	30-Dec-2015	26-Apr-2016	26-Apr-2016	41	45	4	
H	Steam Blowing completion	30-Mar-2016	30-Mar-2016	4-Jan-2017	4-Jan-2017	44	53	9	
I	Unit Synchronization	30-May-2016	30-May-2016	18-Feb-2017	18-Feb-2017	46	54	8	
J	Commissioning/ Full load	31-Jul-2016	31-Jul-2016	23-Mar-2017	23-Mar-2017	48	55	7	
K	COD	30-Nov-2016	30-Nov-2016	31-Dec-2017	31-Dec-2017	52	65	13	Villagers Resistance - Power Input arrangement for running design make up water pump. Details of the same have also been given by the Petitioner in the earlier petition no. 172/MP/2017 and 260/MP/2017 and Commission has allowed the extension for interchange of power with grid vide order dated 18.08.2017 & 27.11.2017 in petition no. 172/MP/2017 & 260/MP/2017 respectively.



57. The Commission had examined in detail the time overrun claimed by the Petitioner and has, on prudence check, condoned the time overrun for reasons which were beyond the control of the Petitioner and not attributable to it. Accordingly, the activities/milestones falling under the period condoned for the Unit-II of the generating station has been considered.

58. The activity of 'Boiler Erection Start' for Unit-II of the generating station had commenced prior to schedule date of 30.9.2013. However, the actual date of commencement of work is 16.9.2013. Hence, there is no delay in the work of 'Boiler Erection Start' for Unit-II of the generating station.

59. As regards the activity of "TG Erection Start", a schedule of 28 months (approx.) was considered by the Petitioner from the 'Schedule start date' of Unit-II i.e. 25.7.2012 to 'TG Erection start' date of 30.11.2014. However, the actual completion period is 32 months from the 'Schedule start date' to 'TG Erection start' date of 30.3.2015. Accordingly, there is a delay of 120 days. As stated earlier, this activity was affected by reasons such as (i) ban on mining; (ii) NGT order dated 13.3.2014; and (iii) law and order issues, for a period more than the delay of 120 days claimed by the Petitioner. Accordingly, delay of 120 days till 'TG Erection start' has only been condoned as the same was for reasons beyond the control of the Petitioner.

60. The activity of 'Boiler Hydro Test' is with a completion schedule of 18 months from the 'Boiler Erection start' date of 30.9.2013. As per schedule, this activity should have been completed by 30.3.2015 as against the actual completion date of 31.8.2015. As such, there is a delay of 5 months (153 days). From the justifications/reasons furnished by the Petitioner, it is noticed that the progress of work was affected by the (i) order of NGT for a period from 13.3.2014 to 13.4.2014



(32 days); (ii) mob violence from 5.7.2014 to 24.8.2014 (51 days); and (iii) ban on mining from 5.8.2013 to 16.12.2013 (133 days). This activity has been affected by the reasons like ban on mining, NGT order dated 13.3.2014 and law and order issues for a period more than the period of delay of 153 days as claimed by the Petitioner. Accordingly, the delay of 153 days up to the actual date of 'Boiler Hydro test' of 31.8.2015 has been condoned.

61. For the activity of 'Boiler light up', the Petitioner has claimed a time overrun of 306 days i.e. 153 more days from the previous activity of 'Boiler Hydro Test' for which the delay of 153 days has already been condoned. The reason for this delay as furnished by the Petitioner is the late clearance given by the administration which had resulted in the delay in start of erection work for Makeup Water System Package. The scheduled start date for erection work as mentioned is January, 2014 and the same had actually commenced in March 2015. We have in this order in para 18 above decided that the delay on this count was not beyond the control of the Petitioner. However, it is observed that the schedule period between 'Boiler hydro test' and 'Boiler light up' is 9 months. As such, considering the actual date of achieving 'Boiler hydro test' on 31.8.2015 i.e. the date till time overrun of 153 days has been condoned, the work of 'Boiler light up' should have been completed by 30.5.2016. However, the actual completion date of 'Boiler Light Up' is 31.10.2016. As such, the period from the date of actual 'Boiler Hydro Test' to the actual date of 'Boiler light up' was also affected by 'Drought' for 49 days, which has been condoned in para 32 above. Accordingly, delay of 202 days (153+49) till 'Boiler light up' is condoned in respect of Unit -II.

62. As regards the activity of 'Steam Blowing completion' which was scheduled to be completed on 30.3.2016, actually got completed on 4.1.2017, thereby causing a



delay of 280 days. The activity of 'Unit synchronisation' which was scheduled on 30.5.2016 was actually completed on 18.2.2017, causing a delay of 264 days. For the activity of 'Commissioning full load' which was scheduled on 31.7.2016, was completed only on 23.3.2017, thereby causing a delay of 235 days. The Petitioner has submitted that the same reasons for delay which have caused the delay in respect of Unit-I were responsible for delay in respect of Unit-II. Since, we have not condoned any further period of delay due to 'Drought' for Unit-I, the same is not allowed for Unit-II also. Accordingly, further delay till "commissioning full load" over and above the allowed delay of 202 days allowed till the "Boiler Light Up" is not condoned.

63. The SCOD considered for time overrun of Unit-II is 25.11.2016 and the actual COD of the said unit is 31.12.2017. The Petitioner has attributed the further delay after "Commissioning full load" on power input arrangement on account of the villagers' resistance. We have, in para 40 of this order, after prudence check, permitted the delay on account of the villagers' resistance for a further period of 85 days w.e.f. 24.3.2017 to 16.6.2017. Accordingly, the delay on this count has been condoned in respect of Unit-II of the generating station. On overall basis, the delay of only 287 days (i.e. 202+85), till the actual COD of the Unit-II has been condoned against an actual delay of 401 days in achieving COD.

### **Unit III- Milestone-wise analysis of Time overrun**

64. The details furnished by the Petitioner in respect of time overrun for Unit-III of the Project are as under:





Task	Milestone	Schedule Start Date	Schedule Completion Date	Actual Start date	Actual Completion date	Schedule Duration (month)	Actual Duration (month)	Delay (Days/month)	Reasons of delay with individual delay (Start and End date)
A	Scheduled Start Date (i.e. Zero Date +12 months)	25-Jan-2013	25-Jan-2013	25-Jan-2013	25-Jan-2013	0	0	0	The reasons are same as that of Unit-I as the zero date of the subsequent units were at an interval of 6 months thereafter (i.e. 12 months after 25.01.2012).
B	Boiler Erection Start	30-Mar-2014	30-Mar-2014	20-Aug-2013	20-Aug-2013	14	6	0	
C	TG Erection Start	30-May-2015	30-May-2015	25-Sep-2015	25-Sep-2015	28	32	4	
D	Boiler Hydro test	30-Sep-2015	30-Sep-2015	31-Mar-2016	31-Mar-2016	32	38	6	
E	Boiler Light up	30-Jun-2016	30-Jun-2016	9-Apr-2017	9-Apr-2017	41	50	9	
F	TG Box up	30-Apr-2016	30-Apr-2016	31-Aug-2016	31-Aug-2016	39	43	4	
G	TG Oil flushing completion	30-Jun-2016	30-Jun-2016	31-Oct-2016	31-Oct-2016	41	45	4	
H	Steam Blowing completion	30-Sep-2016	30-Sep-2016	2-Jun-2017	2-Jun-2017	44	52	8	
I	Unit Synchronization	30-Nov-2016	30-Nov-2016	22-Aug-2017	22-Aug-2017	46	54	8	
J	Commissioning/Full load	31-Jan-2017	31-Jan-2017	12-Mar-2018	12-Mar-2018	48	61	13	
K	COD	30-May-2017	30-May-2017	15-Sep-2018	15-Sep-2018	52	67	15	Villagers Resistance -Northern side Railway siding and water reservoir for Lagoon-2. This delay has also been condoned by the Hon'ble Commission vide its order dated 23.02.2018 & 01.06.2018 in petition no. 51/MP/2018 and 146/MP/2018 respectively wherein time extension for interchange of power with grid has been allowed.

65. The 'SCOD' of Unit-III of the generating station as considered by the Petitioner is 30.5.2017. However, considering the SCOD of 25.5.2017 and the actual COD of Unit-III as 15.9.2018, there is a total delay of 478 days in the COD of Unit-III. The reasons for the delay in the activities from 'Boiler Erection start' to 'Commissioning full load' as submitted by the Petitioner is the same as that of the delay of Unit-I. The Commission in this order had examined in detail the time



overrun claimed by the Petitioner and has, on prudence check, condoned the time overrun for reasons which were beyond the control of the Petitioner and not attributable to it. Accordingly, the activities/milestones falling under the period condoned for the Units-I & II of the generating station have been considered for Unit-III also based on the analysis of milestone activities of Unit-III.

66. The activity of 'Boiler Erection start' of Unit-III of the generating station had actually commenced on 20.8.2013 prior to the scheduled date of 30.5.2014. Hence, there is no delay in the said activity of Unit-III of the generating station.

67. The activity of 'TG Erection start' was scheduled around 28 months from the 'Schedule start date' of Unit-III (25.1.2013) to 'TG Erection start' date of 30.5.2015. However, the actual completion period is 32 months from the 'Scheduled start date' to the actual date of 'TG Erection start' (i.e. 25.9.2015). As such, there is a delay of 118 days. This activity has been affected by the reasons like ban on mining, NGT order dated 13.3.2014 and law and order issues which had already been condoned and the period of delay is more than the delay of 118 days claimed by Petitioner. Accordingly, the delay of 118 days till the 'TG Erection start' has been condoned due to reasons which are not attributable to the Petitioner.

68. The completion schedule of 'Boiler Hydro Test' activity is 32 months. As per schedule, this activity should have been completed by 30.9.2015 as against the actual completion date of 31.3.2016. As such, there is a delay of 6 months (183 days) upto the completion date of 'Boiler Hydro Test'. From the justifications/ reasons furnished by the Petitioner, it is observed that that the progress of work was affected by the (i) ban on mining;, (ii) Order dated 13.3.2014 of NGT; (iii) law



and order issues and (iv) Drought, which had already been condoned and the period of delay condoned is more than the delay of 183 days as claimed by the Petitioner. Accordingly, the delay of 183 days claimed up to the 'Boiler Hydro Test' by the Petitioner is condoned.

69. It is observed that from the 'Schedule start date' of Unit-III i.e. 25.1.2013 to actual date of 'Steam blowing completion' i.e. on 2.6.2017, the delay of 245 days has been claimed by the Petitioner. As such, the activities till 'Steam blowing completion' have been affected by reasons like ban on mining, order of NGT dated 13.3.2014, Law and Order issues and Drought which had already been condoned. Hence, the delay up to 'Steam blowing completion' has already been subsumed in the activities up to 'Boiler Hydro Test'. Accordingly, the delay of only 183 days till 'Steam Blowing completion' on 2.6.2017 has been condoned as the same is for reasons which were beyond the control of the Petitioner.

70. Further, on TG side the last activity is 'T.G Oil flushing completion' which was completed on 31.10.2016 prior to the date of completion of 'Steam blowing completion' i.e. 2.6.2017. As such, both the Turbine and Boiler were available on 2.6.2017 for the next activities of 'Unit synchronization' and 'Commissioning' of Unit-III of the Project.

71. The total delay claimed by the Petitioner up to the 'synchronisation of Unit-III' which was achieved on 22.8.2017, is 265 days. Further, there is a total delay of 405 days in the 'Commissioning full load' of Unit-III which was achieved on 12.8.2018. Considering the fact that delays after 3.3.2016 (15.1.2016 to 3.3.2016 due to 'Drought') had not been condoned, no further delay beyond the delay of 183 days has been condoned till the 'Commissioning full load' of Unit-III of the Project. It is mentioned here that delay between "Commissioning full load" and



‘COD’ as condoned for Unit-I and Unit-II which was caused by non-availability of power for makeup water pumps till 17.6.2017 has not been considered as one of the reasons of delay in achieving ‘Commissioning full load’ of unit-III as the Petitioner had been able to achieve ‘Commissioning full load’ of unit-I and Unit-II before 17.6.2017 i.e date of availability of power for makeup water pumps, may be by some alternate arrangement. Similarly, non-availability of power for make-up pump till 17.6.2017 has not been considered as one of the reasons for further delay beyond 183 days condoned already till previous milestone activities.

72. The scheduled COD of Unit-III was 25.5.2017 and the actual COD is 15.9.2018 thereby leading to a delay of 478 days. The Petitioner has attributed the further delay between the ‘Commissioning full load’ and ‘COD’ on account of Villagers resistance towards acquiring the land for Northern Side Railway siding and Water reservoir for Lagoon-2. We have, in paras 44 to 46 of this order, not permitted/ condoned the delay due to villagers’ resistance in Northern Side Railway siding and Water reservoir for Lagoon-2 and therefore, the said period has not been condoned for Unit-III of the generating station. Accordingly, the delay of only 183 days till actual COD of the Unit-III has been condoned, as against the actual delay of 478 days in achieving COD of Unit-III.

73. Accordingly, the time overrun allowed (against the actual time overrun) for Units-I to III and the schedule COD (reset) for the purpose of computation of IDC due to time overrun, is summarized as under:

Units	SCOD as per IA	Actual COD	Time Overrun considering SCOD ( <i>in days</i> )	Time Overrun allowed ( <i>in days</i> )	SCOD (reset) for IDC & IEDC computation
I	25.5.2016	31.7.2017	432	269	18.2.2017
II	25.11.2016	31.12.2017	401	287	8.9.2017
III	25.5.2017	15.9.2018	478	183	24.11.2017



## Capital Cost

74. Regulation 9(2) of the 2014 Tariff Regulations provides as under:-

*“The Capital cost of a new project shall include the following:*

*(a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*

*(b) Interest during construction and financing charges, on the loans*

*(i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*

*(c) Increase in cost in contract packages as approved by the Commission;*

*(d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;*

*(e) Capitalized Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;*

*(f) Expenditure on account of additional capitalization and de-capitalization determined in accordance with Regulation 14 of these regulations;*

*(g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and*

*(h) Adjustment of any revenue earned by the transmission licensee by using the assets before COD.”*

75. The IA of the project is based at SBI cap appraisal at 4<sup>th</sup> quarter 2011 Price level as under:

- i. Estimated cost of ₹15166.19 crore including IDC & FC of ₹2487.67 crore and WCM of ₹445.77 crore
- ii. Indicative estimated completed cost of ₹16934.65 crore including IDC & FC of ₹2654.84 crore and WCM of ₹460.06 crore

## Impact of time overrun on IDC and IEDC

76. As stated above, out of the delay of 432 days in the COD of Unit-I, 401 days delay in the COD Unit-II and 478 days delay in the COD Unit-III of the generating station, time overrun of 163 days, 114 days and 295 days has been disallowed for Unit-I, Unit-II and Unit-III respectively. Hence, the total delay of total 269 days for Unit-I, 287 days for Unit-II and 183 days for Unit-III has been condoned. Consequent



upon this, the reduction in the IDC and IEDC has been dealt with in subsequent paragraphs.

### **Initial Spares**

77. Regulation 13 of the 2014 Tariff Regulations provides as under:

*“13. Initial Spares: Initial spares shall be capitalized as a percentage of the Plant and Machinery cost up to cut-off date, subject to following ceiling norms:*

*(a) Coal-based/lignite-fired thermal generating stations - 4.0%*

*(b) Gas Turbine/Combined Cycle thermal generating stations - 4.0%*

*Provided that:*

*i. where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Commission, such norms shall apply to the exclusion of the norms specified above:*

*iv. for the purpose of computing of initial the cost spares, plant and machinery cost shall be considered as project cost as on cut-off date excluding IDC, IEDC, Land Cost and cost of civil works. The transmission licensee shall submit the break-up of head wise IDC & IEDC in its tariff application.”*

78. The COD of the generating station is 15.9.2018 and accordingly the cut-off date of the generating station is 31.3.2021. The Petitioner in Form-5B of the amended petition has not furnished the details of initial spares and has submitted that it is included in the respective packages. Hence, the Petitioner is directed to furnish the total amount of initial spares, after bifurcation of the amounts for different packages, at the time of truing-up of tariff of the generating station.

### **Infirm power**

79. The total construction & pre-commissioning expenses as per IA furnished by the Petitioner in Form-5B of the amended petition is ₹9882.74 lakh and total expenditure as on COD of the Unit-III of the generating station is ₹37597.59 lakh. The Petitioner has not furnished the details of infirm power and the revenue earned from sale of infirm power. The Petitioner in Form-5B, under the head start-up fuel, has submitted that the cost has been included in the Erection Testing and



Commissioning cost. Accordingly, the Petitioner is directed to furnish the details of infirm power injected in the grid by Units-I to III till COD and the revenue earned from sale of infirm power, excluding fuel cost, and the details of the fuel used from synchronization till COD at the time of truing up of tariff of the generating station.

### **Liquidated Damages**

80. The Petitioner in the amended petition has not furnished the details of Liquidated Damage recovered from the contractors. Hence, the Petitioner is directed to submit, amongst others, the details of LD, if any, recovered, till COD at the time of truing up of tariff of the generating station.

### **Additional Capital Expenditure**

81. Regulations 14 (1) of the 2014 Tariff Regulations, provides as under:

*“14.(1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*

*(i) Un-discharged liabilities recognized to be payable at a future date;*

*(ii) Works deferred for execution;*

*(iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;*

*(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and*

*(v) Change in law or compliance of any existing law:*

*Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff.*

82. The Petitioner in Form-9A of the amended petition has claimed the year wise statement of the actual and Projected additional capital expenditure from 31.7.2017(COD of Unit-I) to 31.3.2019 as under:



(₹ in lakh)

	2017-18	2017-18	2018-19	2018-19
	31.7.2017 (COD of Unit-I) to 30.12.2017	31.12.2017 (COD of Unit-II) to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 (COD of Unit-III) to 31.3.2019
Additional Capital Expenditure on cash basis (excluding discharges)	20836.62	8237.82	39246.17	12525
IDC included in above	1082.71	369.27	1508.74	-
Additional capital expenditure (excluding IDC and discharges)	19753.92	7868.55	37737.43	12525

83. The Petitioner has claimed additional capital expenditure under Regulation 14(1)(i), 14(1)(ii) and 14(1)(iii) of the 2014 Tariff Regulations. Since the claims of the Petitioner for additional capital expenditure form part of the original scope of work of the Project and falls within the provisions of the aforesaid provisions of the Regulations, the claim of the Petitioner is allowed.

#### **Railway augmentation deposit works**

84. The Petitioner has claimed cost of ₹94600.00 lakh towards Railway infrastructure augmentation and has submitted that as per Policy of the Ministry of Railways, GOI dated 10.12.2012, the Petitioner has opted for Capacity Augmentation (Doubling/ Third line/ Fourth line, etc.) with funds provided by customers. The Petitioner has pointed out that as per the option, Railway owns and operates the said project and in order to facilitate its timely execution, funds are provided to Railways by developers. It has submitted that to meet the coal requirement (of 13.1 MMTPA approx.) of the generating station, the doubling of Hotgi-Bijapur-Gadag line was approved by the NTPC Board under the Customer funding model of the Ministry of Railways Policy. Accordingly, the Petitioner has submitted that it has initially paid an amount of ₹400 crore to South Western Railway (SWR) on 11.4.2014. The Petitioner has stated that the cost of project based on current estimates is ₹94600.00 lakh as per communication of the Railway





Ministry. The Petitioner has submitted that the entire amount has been paid by the Petitioner to SWR for ensuring seamless coal rake transportation to the generating station. The Petitioner has, therefore, requested the Commission to allow the said expenditure towards transportation on coal, in the capital cost of the Project, for the purpose of tariff. It has submitted that the rebate offered by Railways in the freight bills shall be passed on to the beneficiaries, in the fuel transportation cost of the Project.

85. The Respondents TANGEDCO, MESCOM, BESCO & HESCO have submitted that the Commission in its order dated 15.2.2016 in Petition No.59/MP/2015 had considered the prayer of the Petitioner seeking in-principle approval to consider the expenditure incurred through the Indian Railways for timely completion of rail connectivity and/or capacity augmentation of rail infrastructure required for transportation of coal (as per Railway Board Policy dated 10.12.2012) in the capital cost of power projects for the purpose of tariff and had rejected the same. Accordingly, the Respondents have submitted that the present claim of the Petitioner may be rejected.

86. Respondent CESC has submitted that the expenditure is not covered under any of the provisions of the 2014 Tariff Regulations. It has submitted that the same would pose a huge tariff shock to the end consumers. The Respondent has also submitted that the Petitioner has not obtained any consent from the beneficiaries and the matter was not raised by the Petitioner in any forum and was never discussed with the beneficiaries, prior to entering into agreement with Railways.

87. Respondent KSEB has submitted that the claim of the Petitioner for Rail infrastructure may be rejected as this work is not covered under the original scope



of work of the Project and the Petitioner has also not sought any consent of the beneficiaries before making such investment.

88. The Petitioner in its rejoinder has submitted that the funds given to Indian Railway is as per the Railway Board Policy dated 10.12.2012 and hence the same may be allowed in the capital cost and the rebate offered by Indian Railways in freight bills shall be passed on to the beneficiaries in the fuel transportation cost of the Power Project.

89. We have considered the matter. In order to ensure timely availability of rail infrastructure for supply of coal to project of the Petitioner, the Board of Petitioner Company had decided to undertake the implementation of the Rail infrastructure projects associated with the upcoming Kudgi Power Project in terms of the Policy of the Ministry of Railway dated 10.12.2012. It is pertinent to mention that the Petitioner had earlier filed Petition No. 59/MP/2015 seeking in-principle approval for considering the expenditure incurred through the Indian Railways for timely completion of rail connectivity and/ or capacity augmentation of rail infrastructure required for transportation of coal (as per Railway Board Policy dated 10.12.2012) in the capital cost of power projects for the purpose of tariff. It had also submitted, amongst others, that as per the Railway Board Policy dated 10.12.2012, an amount of ₹902.57 crore (₹400 crore for Doubling of Hotigi-Bijapur-Gadag line, ₹250 crore for Flyover at Bakthiyarpur including 3rd line and surface triangle, ₹140 crore for Electrification of Manpur-Tilaiya-Bakthiyarpur line and ₹112.57 crore for Gauge Conversion of balgona-Kotwa section) has been deposited with Railways under Customer Funding Model to facilitate seamless transportation of coal rakes for its upcoming Super Thermal Power Projects at Kudgi, Barh Stagell



and Kotwa. However, the Commission vide its order dated 15.2.2016 rejected the prayer of the Petitioner and held as under:

*“6. We have perused the said order dated 29.7.2010. In our view, the said order does not support the case of the Petitioner. It is not mandatory for the Petitioner to participate in the scheme under the Customer Funding Model as per the Policy of Ministry of Railways. As per the Policy, the fund provided by NTPC shall be refunded by Railways through rebate in the freight which may be up to 7% of the amount invested every year. Further, NTPC will receive interest on the funds provided by it to Railways at a rate equal to prevailing rate of dividend payable by Railways to the general exchequer.*

*7. In our view, the request of the Petitioner to capitalize of such expenditure on funding provided to Railways in the capital cost of the power projects cannot be allowed. However, NTPC may retain the rebate in freight charges in consideration of the investment made by NTPC. It is, however, clarified that beneficiaries will be charged for the normal freight charges in tariff without considering the rebate in freight charges to NTPC.”*

90. It is further noticed that the Petitioner had also not obtained the consent of any of the beneficiaries prior to such huge expenditure being incurred by it. In this background and in the light of the aforesaid decision, we are not inclined to allow the said expenditure claimed by the Petitioner towards Railway augmentation deposit work. It is however made clear that the Petitioner shall retain the rebate in freight charges in consideration of the investment made by the Petitioner. It is, also clarified that beneficiaries will be charged for the normal freight charges in tariff without considering the rebate in freight charges to the Petitioner.

### **Environmental Norms**

91. The Petitioner has submitted that the Ministry of Environment Forests & Climate Change (MOEF&CC), GOI vide Notification dated 7.12.2015 has notified the Environment (Protection) Amendment Rules, 2015, wherein the emission norms relating to SPM, NO<sub>x</sub>, SO<sub>x</sub> etc. have been tightened further. It has submitted that in order to comply with the revised norms of MOEF&CC, the Petitioner has to modify/install various systems. The Petitioner has submitted that it has vide Notification of Award (NoA) dated 31.7.2018 already awarded the Flue Gas



Desulphurisation (FGD) System Package for the Project and the cost for supply and installation of Emission Control System (ECS) and other equipment's for the Project is to the tune of ₹721.28 crore, which is expected to be progressively incurred with in a contract period of 45 months from the date of award. Accordingly, the Petitioner has prayed the Commission may allow the additional capitalization on mandatory installation of ECS under change in law. It has also prayed that the Commission may allow relaxed norms for Auxiliary Power Consumption and O&M charges for this Project by exercise of the 'Power to Relax' under the 2014 Tariff Regulations, as and when such equipment/ system are commissioned for Emission Control Works.

92. The matter has been considered. MOEFCC, GOI vide its Notification dated 7.12.2015 has notified the Environment (Protection) Amendment Rules, 2015 amending the Environment (Protection) Act, 1986. Through the amendment, the existing/applicable environmental norms for all existing, as well as future Thermal Power Projects. The Petitioner has submitted that the MOEFCC Notification is a 'Change in law' event and the Petitioner is required to comply with the revised norms prescribed by the MOEFCC Notification and install Emission Control System (ECS) and carry out major capital works/modifications for it to be able to operate the projects and supply power to the beneficiaries. It is observed that the Petitioner had filed Petition No.98/MP/2017 (NTPC V UPPCL & ors) seeking approval of expenditure on installation of various ECS, for compliance of MOEF&CC Notification dated 7.12.2015 mandating compliance with revised Environmental norms for Thermal Power Stations and the Commission by its order dated 20.7.2018 observed the following:



“44. In our view, the MOEFCC Notification dated 7.12.2015 requiring the thermal generating stations to implement the revised environmental norms amounts to ‘Change in Law’ in accordance with the 2014 Tariff Regulations as well as the Policy directions issued by the MoP under section 107 of the Act.

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49. Based on the guidelines and operational parameters decided by CEA, the Commission shall undertake prudence check and grant the tariff for the capital and operational expenditure on ECS in respect of the generating stations regulated by the Commission. The Commission may, if required, specify detailed guidelines in this regard. 50. The treatment of shut down period required for installation and commissioning of ECS at the projects of the Petitioner shall be decided by the Commission consequent upon preparation of such schedule by CEA. The detailed guidelines referred to in para 49 above will address this aspect also. The Petitioner may thereafter approach the Commission with an appropriate Petition in this regard.”

93. The prayer of the Petitioner is disposed of in terms of the above. Accordingly, the cost of expenditure on installation of ECS shall be considered separately after submission of details of the actual expenditure incurred and the consequential effect on operational norms and the O&M expenses of the generating station.

#### Actual Capital Cost as on COD of Unit-I

94. The details of the capital cost claimed by the Petitioner as on COD of Unit-I is as under:

	(₹ in lakh)
	<b>Amount</b>
Gross Block (as per IND AS) as on COD of Unit-I	666570.14
Less: Gross Block (as per IND AS) for Kudgi-II, including above	5757.03
Gross Block (as per IND AS) for the generating station as on COD of Unit-I	<b>660813.11</b>
Less: IND AS adjustment to Gross Block the generating station as on COD of Unit-I	88.24
Gross Block as per IGAAP (i.e. historical cost basis), the generating station, as on COD of Unit-I (on accrual basis)	<b>660724.87</b>
Less: Un-discharged liabilities, including above	58127.02
<b>Gross Block as per IGAAP for the generating station, as on COD of Unit-I (on cash basis)</b>	<b>602597.85</b>
Add: Railway augmentation deposit works	94600.00
Add: ERV charged to revenue	(-)1753.00
Add: Inter-unit transfer out before COD	2157.00
Add: Notional IDC	1251.00
Add: Unamortised Finance Charges	616.00
Less: Rounding-off differences	0.01
<b>Capital cost claimed as on COD of Unit-I</b>	<b>699468.84</b>



95. The Auditor certified capital cost, on accrual as well as on the cash basis, amounting to ₹660724.87 lakh and ₹602597.85 lakh respectively, including IDC & FC of ₹87405.15 lakh and FERV of ₹8629.87 lakh, as on COD of Unit-I. Accordingly, the hard cost component of capital cost as on COD of Unit-I works out to ₹564689.85 lakh, on accrual basis, and ₹506562.83 lakh, on cash basis. Also, the hard cost (on cash and accrual basis) includes IEDC of ₹34341.35 lakh as on COD of Unit-I, which includes an expenditure of ₹6.92 lakh towards contingency. Since, the 2014 Tariff Regulations do not provide for admissibility of any expenditure towards contingency, the amount of ₹6.92 lakh is not allowed. Considering the details of IEDC submitted in the petition, the allowable IEDC (after accounting for depreciation capitalized and forming part of capital cost upto COD) works out to ₹27293.89 lakh. Accordingly, the hard cost considered for the purpose of tariff as on COD of Unit-I works out to ₹499515.37 lakh, after accounting for corresponding un-discharged liabilities of ₹58127.02 lakh.

96. We now proceed to examine the claim of the Petitioner with respect to IDC & FC, FERV, Notional IDC, FERV charged to revenue, un-amortized finance cost, inter-unit transfer of assets before COD and deposit towards railway augmentation work as under:

a) **IDC & FC**-The Petitioner has claimed IDC & FC amounting to ₹87405.15 lakh as on COD of Unit-I. However, considering the details of draws, repayments, rate of interest applicable to each loan and disallowed time overrun of 163 days, the allowable IDC and FC as on COD of Unit-I works out to ₹76020.20 lakh. Accordingly, the IDC & FC to be deducted as on COD of Unit-I works out to ₹11384.95 lakh.

b) **FERV**- The Petitioner has claimed FERV on loan amounting to ₹8629.87 lakh as on COD of Unit-I. Considering the details of draws, repayments and



exchange rates, the claim is found to be in order and accordingly allowed for the purpose of tariff.

c) **Notional IDC**- The Petitioner has claimed Notional IDC amounting to ₹1251.00 lakh as on COD of Unit-I. There is no provision under the 2014 Tariff Regulations for allowing Notional IDC. However, clause 2(b) of Regulation 9 of the 2014 Tariff Regulations provides for allowance of Normative IDC (over and above actual IDC). Accordingly, considering the quarterly debt-equity position corresponding to actual cash expenditure, allowable Normative IDC (over and above actual IDC) works out to ₹763.08 lakh as on COD of Unit-I.

d) **FERV charged to revenue** - The Petitioner has claimed (-)₹1753.00 lakh towards FERV charged to revenue [(-)₹1041.97 lakh pertaining to loan FERV charged to revenue post 1.4.2016 and (-)₹711.02 lakh pertaining to short-term FERV charged to revenue pertaining to package FERV], as on COD of Unit-I. On perusal of the statement showing the details of FERV calculations, it is observed that FERV amounting to (-)₹1041.97 lakh was charged to revenue prior to COD. As per consistent methodology adopted by the Commission, FERV charged to revenue upto COD is allowed as part of capital cost for the purpose of tariff. As such an amount of (-)₹1752.99 lakh is allowed under this head.

e) **Un-amortized Finance Cost** - The Petitioner has claimed ₹616.00 lakh as un-amortized bond issue expenses corresponding to loan drawn after IND AS. The Petitioner has submitted that in the erstwhile IGAAP, loan issue expenses paid upfront were accounted as and when incurred and the same used to be claimed as part of IDC. However, under IND AS, the upfront bond issue expenses are to be amortized over the tenure of loan resulting in part capitalization of IDC. It appears from the submissions of the Petitioner that the claim under this head is on account of differential treatment of upfront fees under IND AS and IGAAP. Further, the claim is over and above the Auditor certified (cash) capital cost (as per IGAAP) amounting to ₹602597.85 lakh. Since, the Auditor certified cash capital cost of ₹602597.85 lakh is as per IGAAP, any further adjustment to the same on account of IND AS adjustment is not justifiable. Accordingly, the Petitioner's claim under this



head has been ignored for the purpose of tariff. This is subject revision based on truing up exercise.

f) **Inter-unit transfer out of asset upto COD** - The Petitioner has claimed an amount of ₹2157 lakh as on COD of Unit-I towards inter-unit transfer of assets prior to COD of Unit-I. The Petitioner in its justification has not furnished any details. Hence, the claim of the Petitioner is not allowed. However, the Petitioner is directed to submit the details of the assets claimed under inter-unit transfer at the time of truing up exercise and same would be considered in accordance with law.

g) The rounding off gap amounting to (-) 0.01 lakh has been considered for the purpose of tariff.

97. In view of the above, the allowable capital cost as on COD of Unit-I works out to ₹583175.52 lakh.

**Additional Capital Expenditure for the period from COD of Unit-I to COD of Unit-II:**

98. The Petitioner has claimed additional capital expenditure amounting to ₹36657.69 lakh for the period from COD of Unit-I till COD of Unit-II. The Petitioner's claim has been reconciled as under:

	(₹ in lakh)
	<b>2017-18 (31.7.2017 to 30.12.2018)</b>
Closing Gross Block as per IGAAP pertaining to Kudgi-I *	1038324.43
Opening Gross Block as per IGAAP pertaining to Kudgi-I *	660724.87
<b>Additional capital expenditure as per IGAAP pertaining to Kudgi-I</b>	<b>377599.56</b>
Less: Exclusion of capitalization pertaining to Unit-II	354664.85
<b>Net additional capital expenditure claimed (on accrual basis) including IDC of ₹1082.71 lakh</b>	<b>22934.71</b>
Less: Un-discharged liabilities included above	2098.09
Add: Discharges of liabilities (against allowed assets/works)	15821.07
<b>Net additional capital expenditure claimed (on cash basis) including IDC of ₹1082.71 lakh</b>	<b>36657.69</b>

\* Duly certified by the auditor

99. The Petitioner has not furnished the auditor certificate in respect of the additional capital expenditure claimed and is therefore directed to furnish the





Auditor certified statement showing reconciliation of additional capital expenditure claimed with additional capital expenditure as per audited Financial Statement at the time of truing up exercise. The additional capital expenditure allowed above, excludes IDC and discharges of un-discharged liabilities. In line with the consistent methodology adopted by the Commission, the IDC corresponding to the additional capital expenditure and discharges of liabilities corresponding to already admitted assets/works has been considered for the purpose of tariff. Accordingly, the entire additional capital expenditure claim of the Petitioner amounting to ₹36657.69 lakh has been considered for the purpose of tariff.

#### **Actual Capital Cost as on COD of Unit-II**

100. The details of the capital cost claimed by the Petitioner as on COD of Unit-II is as under:

	(₹ in lakh)
Gross Block (as per IND AS) as on COD of Unit-II	1045990.56
Less: Gross Block (as per IND AS) for Kudgi Stage-II, included above	5757.03
<b>Gross Block (as per IND AS) for the project as on COD of Unit-II</b>	<b>1040233.53</b>
Less: IND AS adjustment to Gross Block, pertaining to Kudgi, as on COD of Unit-II	1909.10
<b>Gross Block as per IGAAP (i.e. historical cost basis), for the generating station as on COD of Unit-II (on accrual basis)</b>	<b>1038324.43</b>
Less: Un-discharged liabilities included above	67682.06
<b>Gross Block as per IGAAP for the generating station, as on COD of Unit-II (on cash basis)</b>	<b>970642.37</b>
Add: Railway augmentation deposit works	94600.00
Add: ERV charged to revenue	(-)1984.00
Add: Inter-unit transfer out before COD	2157.00
Add: Notional IDC	1251.00
Add: Un-amortised Finance Charges	1536.00
Less: Rounding-off differences	0.01
<b>Capital cost claimed as on COD of Unit-II</b>	<b>1068202.36</b>

101. The capital cost certified by Auditor, on accrual and cash basis, amounting to ₹1038324.43 lakh and ₹970642.37 lakh respectively as on COD of Unit-II, includes IDC & FC of ₹135655.50 lakh and FERV of ₹13580.98 lakh. Accordingly, the hard



cost component of capital cost as on COD of Unit-II works out to ₹889087.95 lakh, on accrual basis, and ₹821405.89 lakh, on cash basis. The hard cost (on cash as well as accrual basis) includes IEDC amounting to ₹51138.96 lakh as on COD of Unit-II, which includes expenditure of ₹6.92 lakh towards contingency. It is pertinent to mention that the 2014 Tariff Regulations do not provide for admissibility of any expenditure towards contingency and accordingly the amount of ₹6.92 lakh has not been allowed. Considering the details of IEDC submitted in the Petition, the allowable IEDC (after accounting for depreciation capitalized and forming part of capital cost upto COD) has been worked out as ₹45059.49 lakh. Accordingly, the hard cost considered for the purpose of tariff as on COD of Unit-II is ₹815326.42 lakh, after accounting for corresponding un-discharged liabilities amounting to ₹67682.06 lakh.

102. We now proceed to examine, the Petitioner's claim of IDC & FC, FERV, Notional IDC, FERV charged to revenue, un-amortized finance cost, inter-unit transfer of assets before COD and deposit towards railway augmentation work as under:

(a) **IDC & FC** - The Petitioner has claimed IDC & FC of ₹135655.50 lakh as on COD of Unit-II. However, considering the details of drawls, repayments, rate of interest applicable to each loan and disallowed time overrun of 114 days, the allowable IDC & FC works out to ₹121570.77 lakh as on COD of Unit-II. Accordingly, the IDC & FC to be deducted as on COD of Unit-II is to ₹14084.73 lakh.

(b) **FERV** - The Petitioner has claimed FERV on loan amounting to ₹13580.98 lakh as on COD of Unit-II. Considering the details of drawls, repayments and exchange rates, the claim is found to be in order and accordingly allowed for the purpose of tariff.



(c) **Notional IDC** - The Petitioner has claimed Notional IDC amounting to ₹1251.00 lakh as on COD of Unit-II. As stated above, there is no provision under the 2014 Tariff Regulations for allowing Notional IDC. However, Regulation 9(2)(b) of the 2014 Tariff Regulations provides for allowance of Normative IDC (over and above actual IDC). Accordingly, considering the quarterly debt-equity position corresponding to actual cash expenditure, the allowable Normative IDC (over and above actual IDC) works out to ₹987.45 lakh as on COD of Unit-II.

(d) **FERV charged to revenue** - The Petitioner has claimed (-)₹1984.00 lakh towards FERV charged to revenue [(-)₹1155.96 lakh pertaining to loan FERV charged to revenue post 1.4.2016 and (-)₹828.13 lakh pertaining to short-term FERV charged to revenue pertaining to package FERV, as on COD of Unit-II. It is observed from the details of FERV calculations the amount of (-) ₹1156.96 lakh was charged to revenue prior to the COD. As per consistent methodology adopted by the Commission, FERV charged to revenue upto COD is allowed as part of capital cost for the purpose of tariff. Accordingly, the amount of (-)₹1984.09 lakh is allowed under this head.

(e) **Un-amortized Finance Cost** - The Petitioner has claimed ₹1536.00 lakh as the un-amortized bond issue expenses corresponding to loan drawn after IND AS. The Petitioner has submitted that in the erstwhile IGAAP, loan issue expenses paid upfront were accounted as and when incurred and the same used to be claimed as part of IDC. However, under IND AS, the upfront bond issue expenses are to be amortized over the tenure of loan resulting in part capitalization of IDC. It appears from the submissions of the Petitioner that the claim is on account of differential treatment of upfront fees under IND AS and IGAAP. Further, the claim under this head is over and above the auditor certified (cash) capital cost (as per IGAAP) amounting to ₹970642.37 lakh. Since, the capital cost of ₹970642.37 lakh is as per IGAAP, any further adjustment to the same on account of IND AS adjustment is not justifiable. Accordingly, the Petitioner's claim under this head has been ignored for the purpose of tariff. This is however subject to truing up.



(f) **Inter-unit transfer out of asset upto COD** - The Petitioner has claimed an amount of ₹2157 lakh as on COD of Unit-II towards inter-unit transfer of assets prior to COD of Unit-II. The Petitioner in its justification has not furnished any details. Hence, the claim of the Petitioner is not allowed. However, the Petitioner is directed to submit the details of the assets claimed under inter-unit transfer at the time of truing up exercise and same would be considered in accordance with law.

(g) The rounding off gap amounting to (-) 0.01 lakh has been considered for the purpose of tariff.

103. In view of the above, the allowable capital cost as on COD of Unit-II works out to ₹949481.51 lakh.

**Additional Capital Expenditure for the period from COD of Unit-I to COD of Unit-II:**

102. The Petitioner has claimed additional capital expenditure amounting to ₹18745.59 lakh for the period from COD of Unit-II to 31.3.2018 and ₹45073.60 lakh for the period from 1.4.2018 to COD of Unit-III/Station. The Petitioner's claim has been reconciled as shown below:

	(₹ in lakh)	
	2017-18 (31.12.2017 to 31.3.2018)	2018-19 (1.4.2018 to 14.9.2018)
Closing Gross Block as per IGAAP pertaining to Kudgi-I		
Opening Gross Block as per IGAAP pertaining to Kudgi-I		
Additional capital expenditure as per IGAAP pertaining to Kudgi-I	21377.32	-
Less: Exclusion of capitalization pertaining to Unit-III	12200.00	-
<b>Net additional capital expenditure claimed (on accrual basis)</b> (includes IDC amounting to Rs.369.27 lakh and Rs.1508.74 lakh for the period from COD of Unit-II to 31.3.2018 and from 1.4.2018 to COD of Unit-III/Station)	<b>9177.32</b>	43861.48
Less: Un-discharged liabilities included above	939.50	4615.32
Add: Discharges of liabilities (against allowed assets/works)	10507.77	5827.43
<b>Net Additional Capital Expenditure claimed (on cash basis)</b>	<b>18745.59</b>	<b>45073.60</b>



103. The net additional capital expenditure claimed as above includes IDC amounting to Rs.369.27 lakh and Rs.1508.74 lakh for the period from COD of Unit-II to 31.3.2018 and from 1.4.2018 to COD of Unit-III/Station respectively.

104. The Petitioner has not furnished the auditor certificate in respect of the additional capital expenditure claimed and is therefore directed to furnish the Auditor certified statement showing reconciliation of additional capital expenditure claimed with additional capital expenditure as per audited Financial Statement at the time of truing up exercise. The additional capital expenditure allowed above, excludes IDC and discharges of un-discharged liabilities. As per consistent methodology adopted by the Commission, the IDC corresponding to the additional capital expenditure and discharges of liabilities corresponding to already admitted assets/works has been considered for the purpose of tariff. Further, on perusal of Form-9A in respect of statement showing details of additional capital expenditure claimed during the period from COD of Unit-II to 31.3.2018, it is observed that the additional capital expenditure claimed during this period includes an amount of ₹7.77 lakh towards contingency payment. As stated earlier, the expenditure towards contingency has not been allowed for the purpose of tariff and the same is subject to revision at the time of truing-up. Accordingly, the following additional capital expenditure has been considered for the purpose of tariff:

2017-18 (31.12.2017 to 31.3.2018)	2018-19 (1.4.2018 to 14.9.2018)
18737.81	45073.60

**Actual Capital Cost as on COD of Unit-III/ generating station (15.9.2018)**

105. The details of the capital cost claimed by the Petitioner as on COD of Unit-III/ generating station is as under:



(₹ in lakh)

Gross Block (as per IND AS) as on COD of Unit-III	1489362.13
Less: Gross Block (as per IND AS) for Kudgi Stage-II, included above	5757.03
<b>Gross Block (as per IND AS) as on COD of Unit-III</b>	<b>1483605.10</b>
Less: IND AS adjustment to Gross Block as on COD of Unit-III	3765.36
<b>Gross Block as per IGAAP (i.e. historical cost basis), as on COD of Unit-III (on accrual basis)</b>	<b>1479839.74</b>
Less: Un-discharged liabilities included above	117292.38
<b>Gross Block as per IGAAP as on COD of Unit-III (on cash basis)</b>	<b>1362547.36</b>
Add: Railway augmentation deposit works	94600.00
Add: ERV charged to revenue	15025.00
Add: Inter-unit transfer out before COD	2157.00
Add: Notional IDC	1322.00
Add: Unamortised Finance Charges	1633.00
Less: Rounding-off differences	0.05
<b>Capital cost claimed as on COD of Unit-III/ generating station</b>	<b>1477284.31</b>

106. The auditor certified capital cost certified on accrual and cash basis amounting to ₹1479839.74 lakh and ₹1362547.36 lakh respectively as on COD of Unit-III, which includes IDC & FC of ₹195885.91 lakh and FERV of ₹49822.39 lakh. Accordingly, the hard cost component of capital cost as on COD of Unit-III works out to ₹1234131.39 lakh on accrual basis and ₹1116839.01 lakh on cash basis. Further, the hard cost on accrual basis and on cash basis includes IEDC amounting to ₹92289.90 lakh and ₹60988.97 lakh respectively, as on COD of Unit-III, which includes expenditure of ₹46.76 lakh towards contingency. Since the 2014 Tariff Regulations do not provide for admissibility of any expenditure towards contingency, the amount of ₹46.76 lakh is not allowed. Considering the details of IEDC, the allowable IEDC (after accounting for depreciation capitalized and forming part of capital cost upto COD) works out to ₹65206.72 lakh on accrual basis and ₹48610.94 lakh on cash basis. Accordingly, the hard cost considered for the purpose of tariff as on COD of Unit-III works out to ₹1104460.98 lakh, after accounting for corresponding un-discharged liabilities amounting to ₹102587.23 lakh (total liability as on COD of Unit-III (₹117292.38 lakh) *minus* un-discharged liabilities corresponding to disallowed IEDC (₹14705.15 lakh)).



107. We now proceed to examine the Petitioner's claim of IDC & FC, FERV, Notional IDC, FERV charged to revenue, un-amortized finance cost, inter-unit transfer of assets before COD and deposit towards railway augmentation work as under:

a) **IDC & FC**- The Petitioner has claimed IDC & FC amounting to ₹195885.91 lakh as on the COD of Unit-III. However, considering the details of draws, repayments, rate of interest applicable to each loan and disallowed time overrun of 295 days, the allowable IDC & FC works out to ₹152614.07 lakh. Accordingly, IDC & FC to be deducted as on the COD of Unit-III is ₹43271.84 lakh.

b) **FERV** - The Petitioner has claimed FERV on loan amounting to ₹49822.39 lakh as on COD of Unit-III. Considering the details of draws, repayments and exchange rates, the claim is found to be in order and accordingly allowed for the purpose of tariff.

c) **Notional IDC** - The Petitioner has claimed Notional IDC amounting to ₹1322.00 lakh as on the COD of Unit-III. As stated, there is no provision under the 2014 Tariff Regulations for allowing Notional IDC. However, Regulation 9(2)(b) of the 2014 Tariff Regulations provides for allowance of Normative IDC (over and above actual IDC). Accordingly, considering the quarterly debt-equity position corresponding to actual cash expenditure, the allowable Normative IDC (over and above actual IDC) works out to ₹1120.23 lakh as on COD of Unit-III of the generating station.

d) **FERV charged to revenue** - The Petitioner has claimed an amount of ₹15025.00 lakh towards FERV charged to revenue (₹8952.21 lakh pertaining to loan FERV charged to revenue post 1.4.2016, ₹3572.84 lakh pertaining to loan FERV treated as borrowing cost drawn after 1.4.2016 transferred to revenue and ₹2499.66 lakh pertaining to short-term FERV charged to revenue pertaining to package FERV) as on the COD of Unit-III. On perusal of the statement showing the details of FERV calculations, it is observed that FERV amounting to ₹8952.21 lakh was charged to revenue prior to the COD. As per consistent methodology adopted by the Commission, FERV charged to revenue upto COD is allowed as part of capital cost for the purpose of tariff. Further, on perusal of the statement showing IDC capitalized upto COD along with Form-5B, it is observed that ₹3572.84 lakh pertaining to loan FERV treated as borrowing cost already forms part of auditor certified cash capital cost ₹1362547.36 lakh as per IGAAP (on cash basis). As such, any further adjustment of the same over and above auditor certified (cash) capital cost (as per IGAAP) is unjustifiable. Accordingly, the claim of the Petitioner under this head has been ignored for the purpose of tariff, subject to truing up. As



such, out of the Petitioner's claim of ₹15025.00, an amount of ₹11451.87 lakh is allowed under this head.

e) **Un-amortized Finance Cost** - The Petitioner has claimed ₹1633.00 lakh as un-amortized bond issue expenses corresponding to loan drawn after IND AS. The Petitioner has submitted that in the erstwhile IGAAP, loan issue expenses paid upfront were accounted as and when incurred and the same used to be claimed as part of IDC. However under IND AS, the upfront bond issue expenses is to be amortized over the tenure of loan resulting in part capitalization of IDC. It appears from the submissions of the Petitioner that the claim is on account of differential treatment of upfront fees under IND AS and IGAAP. Further, the claim under this head is over and above the capital cost (as per IGAAP) amounting to ₹1362547.36 lakh and therefore any further adjustment to the same on account of IND AS adjustment is not justifiable. Accordingly, the Petitioner's claim under this head has not been considered for the purpose of tariff. This is however subject to truing up.

(f) **Inter-unit transfer out of asset upto COD** - The Petitioner has claimed an amount of ₹2157 lakh as on COD of Unit-I towards inter-unit transfer of assets prior to COD of Unit-I. The Petitioner in its justification has not furnished any details. Hence, the claim of the Petitioner is not allowed. However, the Petitioner is directed to submit the details of the assets claimed under inter-unit transfer at the time of truing up exercise and same would be considered in accordance with law.

(g) The rounding off gap amounting to (-) 0.05 lakh has been considered for the purpose of tariff.

108. In view of above, the allowable capital cost as on COD of Unit-III/Station is worked to ₹1319469.48 lakh.

**Projected Additional Capital Expenditure for the period from COD of Unit-III/ generating station to 31.3.2019**

109. The Petitioner has claimed projected additional capital expenditure amounting to ₹45225.00 lakh for the period from COD of Unit-III to 31.3.2019. The Petitioner's claim has been reconciled as shown below:

	(₹ in lakh)
	<b>2018-19</b> <b>(15.9.2018 to</b> <b>31.3.2019)</b>
Net additional capital expenditure claimed (on accrual basis)	14400.00
Less: Un-discharged liabilities included above	1875.00





Add: Discharges of liabilities (against allowed assets/works)	32700.00
<b>Net additional capital expenditure claimed (on cash basis)</b>	<b>45225.00</b>

110. The Petitioner has not furnished the auditor certificate in respect of additional capital expenditure claimed and is therefore directed to furnish the auditor certified statement showing the reconciliation of additional capital expenditure claimed with additional capital expenditure as per audited financial statement at the time of truing up. The corresponding IDC details shall also be furnished at the time of truing up. The additional capital expenditure allowed above excludes IDC and discharges of un-discharged liabilities. In line with the consistent methodology adopted by the Commission, the IDC corresponding to the additional capital expenditure and discharges of liabilities corresponding to already admitted assets/works has been considered for the purpose of tariff. Accordingly, the entire additional capital expenditure claimed by the Petitioner for ₹45225.00 lakh has been considered for the purpose of tariff.

#### **Capital Cost considered for the purpose of tariff**

111. In view of above, the capital cost approved for the purpose of tariff for the period from COD of Unit-I till 31.3.2019 is as under:

(₹ in lakh)

	2017-18		2018-19	
	31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
Opening Capital Cost	583175.52	949481.51	968219.32	1319469.48
Add: Additional capital expenditure	36657.69	18737.81	45073.60	45225.00
<b>Closing Capital Cost</b>	<b>619833.22</b>	<b>968219.32</b>	<b>1013292.92</b>	<b>1364694.48</b>
Average Capital Cost	601504.37	958850.41	990756.12	1342081.98

#### **Reasonableness of Capital Cost**

112. We now examine the reasonableness of capital cost of the generating station. The comparison of the said capital cost with the benchmark capital cost specified by the Commission is as under:



	(₹ in crore)
	<b>Units- I, II &amp; III (2400 MW)</b>
Capital cost as on 31.3.2019 without IDC, FC, FERV & Hedging charges	11094.1985
Capital cost (Rs/MW)	4.62
Benchmark capital cost (December, 2011)	4.59

113. The hard cost of the project as on 31.3.2019 is ₹11094.1985 (₹4.62 crore/MW), which is higher than the benchmark cost of ₹4.59 crore/MW based on December, 2011 price level for 3 units of 800 MW, as specified by Commission vide its order dated 4.6.2012 for thermal power stations, with coal as fuel.

114. The Petitioner in Form-5B has submitted that the total estimated capital expenditure up to the cut-off date of the generating station is ₹16934.6509 crore, including IDC, FC, FERV & Hedging cost, which is the approved estimated completed cost. This is inclusive of IDC & FC of ₹2654.84 crore and WCM of ₹460.06 crore. Thus, the total cost of the generating station, excluding IDC & FC and WCM, as on the cut-off date, works out to ₹13819.75 crore, which is ₹5.76 crore/MW. The cut-off date of the generating station is 31.3.2021 and the projected hard cost till the cut-off date is ₹5.76 crore/MW. As such, there is a gap of 9 years and 3 months between December, 2011 and March, 2021. Considering this gap, the yearly escalation in the hard cost works out to 2.48% (approx). Since, the hard cost of the generating station as on the year 2018 is being compared to 2011 price level, the increase in the capital cost of the project appears to be competitive and reasonable.

### Debt-Equity Ratio

115. Regulation 19 of the 2014 Tariff Regulations provides as under:

*“19. Debt-Equity Ratio (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*



*Provided that:*

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.”*

116. Considering the details of cash expenditure and the net loan position as on the COD, the debt-equity ratio as on COD of Unit-I, Unit-II and Unit-III works out to 71.58:28.42, 73.24:26.76 and 69.79:30.21 respectively, which is within the normative debt-equity norm of 70:30. As such, debt-equity ratio of 71.58:28.42, 73.24:26.76 and 70:30 has been considered for the purpose of tariff as on COD of Unit-I, Unit-II and Unit-III respectively. Further, for the additional capital expenditure during the period from COD of Unit-I to COD of Unit-II and COD of Unit-II to COD of Unit-III, the debt-equity ratio of 71.58:28.42 and 73.24:26.76 and for the projected additional capital expenditure allowed from COD of Unit-III to 31.3.2019, the debt-equity ratio of 70:30 has been considered for the purpose of tariff. This is subject to truing up exercise in terms of Regulation 8 of the 2014 Tariff Regulations

### **Return on Equity**

117. Regulation 24 of the 2014 Tariff Regulations provides as under:

*“24. Return on Equity:*

*(1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.*

*(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:*

*Provided that:*

*i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:*



ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:

iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

iv). the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:

v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:

vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.”

118. Regulation 25 of the 2014 Tariff Regulations provides as under:

“25. Tax on Return on Equity:

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non-generation or non-transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”.

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.”

119. The Petitioner has claimed return on equity considering the base rate of 15.5% and effective tax rate of 21.3416% (MAT Rate @ 18.5% plus surcharge @ 12% plus Education Cess @ 3%) and 21.5488% (MAT Rate @ 18.5% plus surcharge @ 12% plus Education Cess @ 4%) for the period from COD of Unit-I to 31.3.2018 and 2018-



19 respectively. This has been considered, subject to truing-up exercise. Return on equity has been computed as under:

	2017-18		2018-19	
	31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
Normative Equity - Opening	165733.46	254065.95	259079.88	395840.85
Addition due to additional capital expenditure	10417.80	5013.94	12060.97	13567.50
Normative Equity - Closing	176151.26	259079.88	271140.85	409408.35
Normative Equity - Average	170942.36	256572.91	265110.37	402624.60
Base Rate for return on equity	15.500%	15.500%	15.500%	15.500%
Applicable Tax Rate	21.3416%	21.3416%	21.5488%	21.5488%
Rate of Return on Equity (Pre-tax)	19.705%	19.705%	19.758%	19.758%
<b>Return on Equity</b>	<b>33684.19</b>	<b>50557.69</b>	<b>52380.51</b>	<b>79550.57</b>

## Interest on Loan

120. Regulation 26 of the 2014 Tariff Regulations provides as under:

*“26. Interest on loan capital:*

*(1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*

*(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*

*(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.*

*(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*

*(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*

*Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:*

*Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*



(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing. (9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of the loan.”

121. Interest on loan has been worked out as mentioned below:

i) Gross normative loan corresponding to admissible capital cost works out to ₹417442.06 lakh as on COD of Unit-I, ₹695415.56 lakh as on COD of Unit-II and ₹923628.64 lakh as on COD of Unit-III/Station.

ii) The net opening loan (normative) as on COD of Unit-I is same as gross normative loan, the cumulative repayment of normative loan up to the previous year/period being nil.

iii) Depreciation allowed has been considered as (normative) repayments for respective periods.

iv) Average net loan has been calculated as average of opening and closing.

v) Weighted average rate of interest has been computed considering details of actual loan portfolio as submitted by the Petitioner, after adjusting IDC corresponding to allowable additional capital expenditure.

122. Necessary calculation for interest on loan is as under:

(₹ in lakh)

	2017-18		2018-19	
	31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
Gross Normative Loan	417442.06	695415.56	709139.44	923628.64
Cumulative Repayment	-	12389.44	24269.48	46953.46
Net Normative Loan - Opening	417442.06	683026.12	684869.95	876675.18
Addition due to additional capital expenditure	26239.89	13723.88	33012.63	31657.50
Repayment of Normative Loan	12389.44	11880.04	22683.98	36788.71
Net Normative Loan - Closing	431292.51	684869.95	695198.61	871543.97





Normative Loan - Average	424367.29	683948.04	690034.28	874109.57
Weighted Average Rate of Interest	6.2418%	6.3473%	6.2980%	6.6987%
Interest on Loan	26488.27	43412.52	43458.53	58553.78

## Depreciation

123. Regulation 27 of the 2014 Tariff Regulations provides as under:

*(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof. Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.*

*(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.*

*(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:*

*Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:*

*Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:*

*Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.*

*(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.*

*(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system:*

*Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.*



(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2014 from the gross depreciable value of the assets.

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services.”

124. The Petitioner has claimed depreciation considering weighted average rate of depreciation of 4.9138%, 5.0051%, 5.0032% and 5.0532% for the period from COD of Unit-I to COD of Unit-II, COD of Unit-II to 31.3.2018, 1.4.2018 to COD of Unit-III and from COD of Unit-III to 31.3.2019 respectively. Considering the rates of depreciation enclosed in the Appendix-III to the 2014 Tariff Regulations, the admissible weighted average rate of depreciation works out to 4.9138%, 4.9696%, 5.0041% and 5.0532% for the period from COD of Unit-I to COD of Unit-II, COD of Unit-II to 31.3.2018, from 1.4.2018 to COD of Unit-III and from COD of Unit-III to 31.3.2019 respectively and the same has been considered for the purpose of tariff. This is subject to truing-up. Accordingly, depreciation has been calculated as under:

	(₹ in lakh)			
	2017-18		2018-19	
	31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
Average Capital Cost	601504.37	958850.41	990756.12	1342081.98
Weighted Average Rate of Depreciation	4.9138%	4.9696%	5.0041%	5.0532%
Depreciable Value	511912.48	833523.92	862239.06	1178432.34
Remaining Depreciable Value	511912.48	821134.48	837969.57	1131478.88
Depreciation for the period	12389.44	11880.04	22683.98	36788.71
<b>Depreciation for the year (annualised)</b>	601504.37	958850.41	990756.12	1342081.98
Cumulative depreciation (at the end of the year/period)	4.9138%	4.9696%	5.0041%	5.0532%





## Operation & Maintenance Expenses

125. Regulation 29(1) (a) of the 2014 Tariff Regulations provides for the following O&M expense norms for coal based generating stations of 600 MW sets & above:

(₹ in lakh/MW)

2017-18	2018-19
17.30	18.38

126. The annualised O&M expenses claimed by the Petitioner in Form-3A vide its affidavit dated 4.3.2019 based on above norms as on 31.3.2019 is as under:

(₹ in lakh)

2017-18		2018-19	2018-19
31.7.2017 (COD of Unit-I) to 30.12.2017	31.12.2017 (COD of Unit-II) to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 (COD of Unit-III) to 31.3.2019
<b>13840.00</b>	<b>27680.00</b>	<b>29408.00</b>	<b>44112.00</b>

127. The annualized O&M expenses claimed by the Petitioner as above is in order and hence allowed for the purpose of tariff

## Water Charges

128. Regulation 29(2) of the 2014 Tariff Regulations provide as under:

*“29.(2) The Water Charges and capital spares for thermal generating stations shall be allowed separately:*

*Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details regarding the same shall be furnished along with the petition:*

*Provided that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalization or consumption of stores and spares and renovation and modernization.”*

129. In terms of the above regulations, water charges are to be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check of the details furnished by the Petitioner. The Petitioner vide affidavit dated 4.3.2019 has furnished the water charges to be



allowed in tariff based on actual for the period from COD of Unit-I i.e. (31.07.2017) up to COD of the generating station(15.9.2018) and projections from station COD till 31.3.2019. The details in respect of water charges such as type of cooling water system, water consumption, rate of water charges furnished by the Petitioner is as under:

Description	Remarks
Type of Plant	Coal
Type of cooling water system	Closed Circuit Cooling System
Allocation of water for the generating station Annual water requirement per unit	5.2 TMC per annum 21900000 CuM
Rate of Water charges	As fixed by GOK from time to time for industrial usage. However, the present rate is Rs 3200 per MCFT
Water Charges for the period 31.7.2017 to 31.3.2018 (Rs in lakh)	670.69
Water Charges for the period 1.4.2018 to 14.9.2018 (Rs in lakh)	407.86

130. The Petitioner in the Form-3A of its affidavit dated 4.3.2019 has claimed water charges as under:-

2017-18		2018-19	2018-19
(₹ in lakh)			
31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
1003.29	1003.29	891.43	891.43

131. The Petitioner has furnished the detail of type of plant, type of cooling water system, along with contracted quantum. However, the Petitioner has not furnished the Water agreement entered into with the State Govt. agency. The Petitioner has claimed water charges based on actual for the period from COD of Unit-I i.e. (31.7.2017) up to station COD i.e. (15.9.2018) and based on projections from station COD (i.e.15.9.2018) till 31.3.2019. Since, the water charges claimed by the Petitioner up to COD of the generating station are on actuals, the same is allowed for the period 2017-18 and 2018-19. However, the Petitioner is directed to furnish the details of actual water consumption along with the Water agreement at



the time of truing up of tariff and the same shall be subject to retrospective adjustment. Accordingly, the total annualized O&M expenses including water charges claimed and allowed is summarized as under:

(₹ in lakh)

	2017-18		2018-19	2018-19
	31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
Normative O&M Expenses claimed	13840	27680	29408	44112
<b>O&amp;M Expenses as allowed (annualized)</b>	<b>13840</b>	<b>27680</b>	<b>29408</b>	<b>44112</b>
Water Charges claimed	1003.29	1003.29	891.43	891.43
<b>Water Charges allowed (annualized)</b>	<b>1003.29</b>	<b>1003.29</b>	<b>891.43</b>	<b>891.43</b>
<b>Total O&amp;M Expenses allowed (annualized)</b>	<b>14843.29</b>	<b>28683.29</b>	<b>30299.43</b>	<b>45003.43</b>

132. The Water charges allowed as above is subject to truing-up at the end of the tariff period and the Petitioner is therefore directed to place on record all relevant information.

133. The Petitioner has claimed additional O&M expenses on account of the installation of ECS and other equipment. The same shall be guided by our observations in para 91 of this order.

### Operational Norms

134. The operational norms in respect of the generating station considered by the Petitioner are as under:

Normative Annual Plant Availability Factor (%)	85
Heat Rate (kcal/kWh)	2241.41
Auxiliary Power Consumption (%)	5.75
Specific Oil Consumption (ml/kWh)	0.50

135. The operational norms claimed by the Petitioner are discussed as under:

### Normative Annual Plant Availability Factor (NAPAF)

136. Regulation 36(A)(a) of the 2014 Tariff Regulations provides as under:



“(a) All Thermal generating stations, except those covered under clauses (b) (c) (d) &(e)- 85%.

Provided that in view of the shortage of coal and uncertainty of assured coal supply on sustained basis experienced by the generating stations, the NAPAF for recovery of fixed charges shall be 83% till the same is reviewed.

The above provision shall be reviewed based on actual feedback after 3 years from 1.4.2014.”

137. The Petitioner has considered the NAPAF of 85% for the periods 2017-18 and 2018-19 and the same is in line with the operational norms specified under the 2014 Tariff Regulations. Accordingly, NAPAF of 85% has been considered for the said periods.

### Station Heat Rate (SHR)

138. Regulation 36(C)(b)(i) of the 2014 Tariff Regulations provides Station Heat Rate as under:

#### (C) Gross Station Heat Rate

(b) New Thermal Generating Station achieving COD on or after 1.4.2014

(i) Coal-based and lignite-fired Thermal Generating Stations  
= 1.045 X Design Heat Rate (kCal/kWh)

Where the Design Heat Rate of a generating unit means the unit heat rate guaranteed by the supplier at conditions of 100% MCR, zero percent make up, design coal and design cooling water temperature/back pressure.

Provided that the design heat rate shall not exceed the following maximum design unit heat rates depending upon the pressure and temperature ratings of the units:

Pressure Rating (Kg/cm <sup>2</sup> )	150	170	170	247
SHT/RHT (OC)	535/535	537/537	537/565	565/593
Type of BFP	Electrical Driven	Turbine Driven	Turbine Driven	Turbine Driven
Max Turbine Heat Rate (kCal/kWh)	1955	1950	1935	1850
Min.Boiler Efficiency				
Sub-Bituminous Indian Coal	0.86	0.86	0.86	0.86
Bituminous Imported Coal	0.89	0.89	0.89	0.89
Max Design Unit Heat Rate (kCal/kWh)				
Sub-Bituminous Indian Coal	2273	2267	2250	2151
Bituminous Imported Coal	2197	2191	2174	2078

Provided further that in case pressure and temperature parameters of a unit are different from above ratings, the maximum design unit heat rate of the nearest class shall be taken:



*Provided also that where unit heat rate has not been guaranteed but turbine cycle heat rate and boiler efficiency are guaranteed separately by the same supplier or different suppliers, the unit design heat rate shall be arrived at by using guaranteed turbine cycle heat rate and boiler efficiency:*

*Provided also that where the boiler efficiency is below 86% for Sub-bituminous Indian coal and 89% for bituminous imported coal, the same shall be considered as 86% and 89% respectively for Sub-bituminous Indian coal and bituminous imported coal for computation of station heat rate:*

*Provided also that maximum turbine cycle heat rate shall be adjusted for type of dry cooling system:*

*Provided also that if one or more generating units were declared under commercial operation prior to 1.4.2014, the heat rate norms for those generating units as well as generating units declared under commercial operation on or after 1.4.2014 shall be lower of the heat rate norms arrived at by above methodology and the norms as per the Regulation 36(C)(a)(i):”*

139. The Petitioner has furnished design turbine cycle heat rate and boiler efficiency of the generating station as 1819.30 kcal/kWh and 84.82% respectively. Thus, the unit design heat rate worked out from the data furnished by the Petitioner works out as 2144.90 kcal/kWh ( $1819.30/0.8482$ ). Considering the margin of 4.5% in terms of the 2014 Tariff Regulations, the Gross Station Heat Rate (GSHR) works out as 2241.42 kcal/kWh ( $1.045 \times 2144.90$ ). Accordingly, the Petitioner has prayed for consideration of the heat rate norm of 2241.41 kcal/kWh in terms of Regulation 54 (Power to relax) of the 2014 Tariff Regulations.

140. As per Regulation 36(C)(b)(i) of the 2014 Tariff Regulations, for new thermal generating station achieving COD on or after 1.4.2014, the GSHR= $1.045 \times$  Design Heat Rate i.e. 2241.41 (i.e.  $1.045 \times 2144.90$ ), provided that the design heat rate shall not exceed the maximum design unit heat rates depending upon the pressure and temperature ratings of the units as specified under the regulations (where ceiling design heat rate for plants having temperature of 565/593°C and pressure rating of 247 Kg/cm<sup>2</sup> using sub bituminous coal is given as 2151 kcal/kWh). The design heat rate of the generating station i.e. 2144.90 kcal/kWh is lower than the ceiling design heat rate of 2151 kcal/kWh. Further, Regulation 36(C)(b)(i) provides



that where the boiler efficiency is below 86% for sub-bituminous Indian coal and 89% for bituminous imported coal, the same shall be considered as 86% and 89% respectively for Sub-bituminous Indian coal and bituminous imported coal for computation of station heat rate. The boiler efficiency of the generating station is 84.82%. However, the same shall be considered as 86% as per the above regulation. Accordingly, the unit design heat rate works out as 2115.47 kcal/kWh (1819.30/0.86). Thus, considering the multiplying factor of 1.045, the applicable Station Heat Rate is 2210.66 kcal/kWh (1.045 x 2115.47). Accordingly, the claim of the Petitioner to consider the heat rate of 2241.41 kcal/kWh is rejected and the GSHR of **2210.66 kcal/kWh** has been considered for the purpose of tariff.

#### **Auxiliary Power Consumption (APC)**

141. Regulation 36(E)(a)(i) of the 2014 Tariff Regulations provides for APC as under:

##### ***(E) Auxiliary Energy Consumption***

*(a) Coal-based generating stations except at (b) below:*

	<i>With Natural Draft cooling tower or without cooling tower</i>
<i>(i) 200 MW series</i>	8.5%
<i>(ii) 300/330/350/500 MW and above</i>	
<i>Steam driven boiler feed pumps</i>	5.25%
<i>Electrically driven boiler feed pumps</i>	7.75%

*Provided further that for thermal generating stations with induced draft cooling tower, the norms shall be further increased by 0.5%.*

142. The Petitioner has considered APC of 5.75% for the period 2017-19. The normative APC for 500 MW and above generating plants having steam driven boiler feed pump is 5.25%. Further, for thermal generating stations with induced draft cooling tower, the norms shall be further increased by 0.5%. Since the Petitioner has Steam Driven Boiler Feed Pump along with induced draft cooling tower, the APC of 5.75% as claimed by the Petitioner is as per the specified norms and is



allowed. It is noticed that the Petitioner has also prayed for additional APC on account of installation of FGD system as and when FGD is installed for ECS. The same shall be guided by our observations in para 92 of this order and shall be based on the actual auxiliary consumption of the equipment.

### Specific Oil Consumption

143. Regulation 36(D)(a) of the 2014 Tariff Regulation provides for the Secondary fuel oil consumption of 0.50 ml/kWh for coal based generating station. Hence, the Secondary Fuel Oil consumption as considered by the Petitioner is as per norms and is allowed.

144. Based on the above, the operational norms allowed for the period 2017-19 is as under:

Normative Annual Plant Availability Factor (%)	85
Heat Rate (kcal/kWh)	2210.66
Auxiliary Power Consumption (%)	5.75
Specific Oil Consumption (ml/kWh)	0.50

### Interest on Working Capital

145. Sub-section (a) of clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

*“28 (1) The working capital shall cover:*

*(a) Coal-based/lignite-fired thermal generating stations*

*(i) Cost of coal or lignite and limestone towards stock, if applicable, for 15 days for pit-head generating stations and 30 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower;*

*(ii) Cost of coal or lignite and limestone for 30 days for generation corresponding to the normative annual plant availability factor;*

*(iii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;*

*(iv) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 29;*



(v) *Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the normative annual plant availability factor; and*

(vi) *Operation and maintenance expenses for one month.”*

### **Fuel Cost and Energy Charges in Working Capital**

146. The Petitioner has claimed cost for fuel component in working capital based on ‘as received’ GCV of coal and secondary fuel oil procured for the preceding three months of April 2017, May 2017 and June 2017 for Unit-I, September 2017, October 2017 and November 2017 for Unit-II and June 2018, July 2018 and August 2018 for Unit-III as under:

	2017-18		2018-19	2018-19
	31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
Cost of coal towards stock	15597.68	32000.68	32000.68	52389.60
Cost of coal towards generation	15597.68	32000.68	32000.68	52389.60
Cost of secondary fuel oil 2 months	219.67	393.48	393.48	685.97

147. The Petitioner in Form-15 has claimed the details of LDO with respect to the fuel computation of energy charges. The Commission vide ROP of the hearing dated 14.5.2019 had sought clarification from the Petitioner regarding consumption of LDO and details of HFO for computation of fuel components and energy charges. In response, the Petitioner has submitted that the LDO system has been commissioned for all the Units of the project as per the scheme. The Petitioner has also submitted that the LDO is being fired using HFO pressurizing pumps since the commissioning of the system and usage of HFO system will be phased out in the Petitioner Company. Accordingly, HFO is not being used in the project and LDO is fired in the boiler. Hence, LDO is considered for computation of fuel component in energy charges.





148. The Petitioner in Form-15 has furnished 'as billed' GCV and 'as received' GCV of coal during preceding three months of the COD of each unit. In compliance with the direction of the Commission, the Petitioner vide its affidavit dated 10.4.2019 has submitted that the coal samples for measuring 'as received' GCV of coal were taken from wagon top. The Petitioner has also placed on record the GCV of coal for preceding three months on 'as received' basis.

149. In view of the above, the cost for fuel components in working capital has been computed at 85% NAPAF and based on 'as received' GCV of coal & price of coal procured along with secondary fuel oil for the preceding three months of COD of each unit of the generating station. Accordingly, the cost for fuel component for the purpose of tariff is allowed as under:

*(₹ in lakh)*

	2017-18		2018-19	2018-19
	31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
Cost of coal towards stock (30 days)	15381.46	31664.61	31664.61	50962.48
Cost of coal towards generation (30 days)	15381.46	31664.61	31664.61	50962.48
Cost of secondary fuel oil 2 months	222.72	398.95	398.95	695.50

150. It is pertinent to mention that the cost of coal towards stock and generation allowed during the years 2017-18 and 2018-19 is less than the cost claimed by the Petitioner. This is due the fact that while the claim of the Petitioner is based on quantity and price of coal supplied during previous three months plus the quantity and price of opening stock for the prior periods, the cost allowed in this order for the years 2017-18 & 2018-19 is based on quantity and price of coal supplied during previous three months only as per the provisions of the 2014 Tariff Regulations. Further, the cost of secondary fuel oil for 2 months allowed during the year 2017-18 and 2018-19 is more than the claim of the Petitioner. In this regard, it is



observed that Petitioner has claimed secondary fuel oil for 60 days instead of 2 months. However, the cost of secondary fuel oil for 2 months as computed in this order is considered in terms of the provisions of the 2014 Tariff Regulations.

### Energy Charge Rate (ECR)

151. Clause 6(b) of Regulation 30 of the 2014 Tariff Regulations provides as under:

*“6. Energy charge rate (ECR) in Rupees per KWh on ex-power plant basis shall be determined to three decimal place in accordance with the following formula:*

*(b) For gas based and liquid fuel based stations  $ECR = GHR \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$*

*Where,*

*AUX = Normative auxiliary energy consumption in percentage.*

*CVPF = Weighted Average Gross calorific value of primary fuel as received, in Kcal per kg, per litre or per standard cubic metre, as applicable.*

*ECR = Energy charge rate, in Rupees per KWh sent out.*

*GHR = Gross station heat rate, in KCal per KWh.*

*LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable during the month.”*

152. As stated, the Petitioner has claimed ECR (ex-bus) for 340.403 Paise/kWh for Unit-I, 348.874 Paise/kWh for Unit-I and Unit-II and 380.921 Paise/kWh for all units for the period 2017-18 and 2018-19 based on the weighted average price, GCV of coal (as received basis) & Oil procured and burnt for the preceding three months of COD of each unit of the generating station. ECR has been worked out based on the operational norms specified under the 2014 Tariff Regulations and on ‘as received’ GCV of coal for preceding three months of the COD of the respective units of the generating station as under:

Sr. No.	Unit	2017-18		2018-19	2018-19
		31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
1	<b>Capacity</b>	<b>MW</b>	800	1600	2400
2	Weighted average Gross Station Heat Rate	Kcal/kWh	2210.66	2210.66	2210.66
3	Weighted average Auxiliary Energy Consumption	%	5.75	5.75	5.75
4	Weighted average GCV of oil	Kcal/lit	9231	9556.26	9248.56



5	Weighted average GCV of Coal (as received)	Kcal/kg	3947.87	3500.38	3500.38	3579.51
6	Weighted average price of oil	Rs/KL	44867.58	40183.87	40183.87	46702.62
7	Weighted average price of Coal	Rs/MT	5622.18	5131.40	5131.40	5629.88
8	Rate of Energy Charge ex-bus	Rs/kWh	3.357	3.452	3.452	3.706

153. Accordingly, the energy charges for 2 months on the basis of “as received” GCV of coal for the purpose of interest on working capital has been worked out as under:

(₹ in lakh)

2017-18		2018-19	2018-19
31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
31411.92	64601.69	64601.69	104032.68

### Maintenance Spares

154. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provides for maintenance spares @ 20% of the O&M expenses. As specified under Regulation 29(2) of the 2014 Tariff Regulations, the maintenance spares @20% of the O&M expenses, including water charges claimed and allowed are as under:

(₹ in lakh)

2017-18		2018-19	2018-19
31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
2968.66	5736.66	6059.89	9000.69

### Receivables

155. Receivables equivalent to two months of capacity charge and energy charges has been worked out and allowed as under:

(₹ in lakh)

	2017-18		2018-19	
	31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
Variable Charges - for two months	31411.92	64601.69	64601.69	104032.68
Fixed Charges - for two months	19231.23	31919.95	32851.29	47242.71
<b>Total</b>	<b>50643.15</b>	<b>96521.64</b>	<b>97452.98</b>	<b>151275.39</b>



## O & M Expenses (1 month)

156. Regulation 28(1)(a)(vi) of the 2014 Tariff Regulations provides for O&M expenses for one month for coal-based generating station. Accordingly, one month O&M expenses (annualized) allowed are as under:

(₹ in lakh)

2017-18		2018-19	2018-19
31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
1236.94	2390.27	2524.95	3750.29

## Rate of interest on working capital

157. Clause (3) of Regulation 28 of the 2014 Tariff Regulations provides as under:

*“Interest on working Capital: (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1<sup>st</sup> April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later.”*

158. In terms of the above regulation, bank rate of 12.60% (i.e. SBI base rate of 9.10% as on 1.4.2017 plus 350 bps) and 12.20% (i.e. SBI base rate of 8.70% as on 1.4.2018 plus 350 bps) for the period from COD of Unit-I to COD of the generating station and from COD of the generating station to 31.3.2019 respectively has been considered for the purpose of calculating interest on working capital. Accordingly, interest on working capital has been computed as under:

(₹ in lakh)

	2017-18		2018-19	
	31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
Cost of coal for 30 days towards stock	15381.46	31664.61	31664.61	50962.48
Cost of coal for 30 days towards generation	15381.46	31664.61	31664.61	50962.48
Cost of secondary fuel oil for two months	222.72	398.95	398.95	695.50
Maintenance spares	2968.66	5736.66	6059.89	9000.69
Receivables for two months	50643.15	96521.64	97452.98	151275.39
O&M expenses for one month (annualized)	1236.94	2390.27	2524.95	3750.29



<b>Total Working Capital</b>	<b>85834.39</b>	<b>168376.74</b>	<b>169765.99</b>	<b>266646.82</b>
Rate of interest	12.6000%	12.6000%	12.6000%	12.2000%
<b>Interest on working capital</b>	<b>10815.13</b>	<b>21215.47</b>	<b>21390.51</b>	<b>32530.91</b>

### Annual Fixed Charges

159. Based on the above, the annual fixed charges approved for the generating station for the period 2017-19 is summarized as under:

	(₹ in lakh)			
	2017-18		2018-19	
	31.7.2017 to 30.12.2017	31.12.2017 to 31.3.2018	1.4.2018 to 14.9.2018	15.9.2018 to 31.3.2019
Depreciation	29556.51	47650.72	49578.75	67817.57
Interest on Loan	26488.27	43412.52	43458.53	58553.78
Return on Equity	33684.19	50557.69	52380.51	79550.57
Interest on Working Capital	10815.13	21215.47	21390.51	32530.91
O&M Expenses	14843.29	28683.29	30299.43	45003.43
<b>Total</b>	<b>115387.40</b>	<b>191519.69</b>	<b>197107.73</b>	<b>283456.26</b>

Note: 1) All figures are on annualized basis. 2) All the figures under each head have been rounded. The figure in total column in each year is also rounded. Because of rounding of each figure the total may not be arithmetic sum of individual items in columns.

### Month to Month Energy Charges

160. The Petitioner shall compute and claim the Energy Charges on month to month basis from the beneficiaries based on the formulae given under Regulation 30(6)(a) of the 2014 Tariff Regulations.

161. The Commission vide order dated 19.2.2016 in Petition No. 33/MP/2014 (TPDDL V NTPC & ors) had directed NTPC to introduce helpdesk to attend to the queries of the beneficiaries with regard to the Energy Charges. Accordingly, contentious issues if any, which arise regarding the Energy Charges, should be sorted out by the Petitioner with the beneficiaries at the Senior Management level

### Application filing fee and Publication Expenses

162. The Petitioner has sought reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the periods 2014-19. The Petitioner has deposited the filing fees in terms of the provisions of



the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. The Petitioner has also incurred charges towards publication of the tariff petition in newspapers. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations, the Petitioner is entitled to recover the filing fees and the expenses incurred on publication of notices directly from the respondents, on pro rata basis, on submission of documentary proof of the same.

163. The annual fixed charges approved as above are subject to truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

164. This order disposes of Petition No. 199/GT/2017.

**Sd/-**  
**(I.S.Jha)**  
**Member**

**Sd/-**  
**(Dr. M. K. Iyer)**  
**Member**

**Sd/-**  
**(P.K.Pujari)**  
**Chairperson**



**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 256/GT/2014**

**Coram:**

**Shri Gireesh B. Pradhan, Chairperson**

**Shri A.K. Singhal, Member**

**Shri A.S. Bakshi, Member**

**Dr. M.K. Iyer, Member**

**Date of Order: 12.6.2017**

**In the matter of**

Suo motu Review of order dated 8.3.2017 in Petition No. 256/GT/2014

**And**

**In the matter of**

Approval of tariff of NLC Thermal Power Station- II Stage- I (630 MW) and Stage-II (840 MW) for the period 2014-19.

**And**

**In the matter of**

Neyveli Lignite Corporation Limited  
Neyveli House, 135, EVR Periyar Road,  
Kilpauk, Chennai – 600010

.....**Petitioner**

Vs

1. Tamil Nadu Generation and Distribution Company Ltd  
800, Anna Salai  
Chennai – 600002
2. Power Company of Karnataka Ltd.  
KPTCL Building, Kaveri Bhavan, K.G.Road,  
Bangalore – 560009
3. Bangalore Electricity Supply Company Ltd.  
KR Circle, Bangalore – 560001
4. Mangalore Electricity Supply Company Ltd.  
Paradigm Plaza, AB Shetty Circle,  
Mangalore-575001
5. Gulbarga Electricity Supply Company Ltd.  
Station Main Road, Gulbarga-585102



6. Hubli Electricity Supply Company Ltd.  
Corporate Office, Navanagar,  
PB Road, Hubli-580025
7. Chamundeshwari Electricity Supply Corporation Ltd.  
Corporate Office, No.927, LJ Avenue, New KantarajaUrs Road,  
Saraswathipuram, Mysore-570009
8. Kerala State Electricity Board Ltd.  
Vaidyuthi Bhavanam, Pattom  
Thiruvananthapuram-695004
9. Puducherry Electricity Department  
137, NSC Bose Salai,  
Puducherry – 605001
10. Transmission Corporation of Andhra Pradesh  
Vidyut Soudha, Khairatabad  
Hyderabad- 500082
11. Transmission Corporation of Telangana  
Vidyut Soudha, Khairatabad  
Hyderabad- 500082

.....Respondents

### **ORDER**

This petition was filed by the petitioner, Neyveli Lignite Corporation (NLC) for approval of annual fixed charges and energy charges for the period 2014-19 for NLC TPS-II, Stage-I (630 MW) and Stage-II (840 MW) (the generating station) based on the 2014 Tariff Regulations and the Commission vide order dated 8.3.2017 has allowed the annual fixed charges based on the opening capital cost of Rs 32023.21 lakh as on 1.4.2014 as under:

#### **Stage-I**

(₹ in lakh)

	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Return on Equity	729	733	733	733	733
Interest on Loan	0	0	0	0	0
Depreciation	0	0	0	0	0
Interest on Working Capital	4080	4147	4201	4268	4339
O & M Expenses	15080	16025	17033	18104	19244
Special Allowance	4365	4642	4937	5250	5584
<b>Total</b>	<b>24254</b>	<b>25547</b>	<b>26904</b>	<b>28355</b>	<b>29900</b>





## Stage-II

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	3342	3166	2974	2782	2590
Interest on Loan	0	0	0	0	0
Depreciation	975	975	975	975	975
Interest on Working Capital	5516	5602	5669	5754	5844
O & M Expenses	20099	21359	22703	24131	25651
Special Allowance	0	0	0	1894	6044
Separate Compensation Allowance	735	840	840	630	210
<b>Total</b>	<b>30666</b>	<b>31941</b>	<b>33161</b>	<b>36165</b>	<b>41314</b>

2. It is noticed that certain inadvertent arithmetic/ clerical errors has crept in order dated 8.3.2017 as regards the total projected water charges allowed and the same is required to be corrected. Accordingly, in exercise of the power under Regulation 103 A of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2009, the error in total water charges allowed is rectified and consequently the annual fixed charges for Stage-I and II of the generating station are revised as stated in subsequent paragraphs.

### **Water Charges**

3. The Water charges allowed in para-49 of order dated 8.3.2017 is as under:

	<b>Projected Quantity Considered (KL) (1)</b>	<b>Pumping Charges ( 0.376₹/KL) (2)=(1)x0.376</b>	<b>Water cess (3)= (22995/7)</b>	<b>Water Consent Fee (4)= (143880/7)</b>	<b>Projected Water charge Allowed (₹ in lakh) (5)= (2)+(3)+(4)</b>
2014-15	61310468	23052735.96	3285.00	20554.28	23.07
2015-16	61310468	23052735.96	3285.00	20554.28	23.07
2016-17	61310468	23052735.96	3285.00	20554.28	23.07
2017-18	61310468	23052735.96	3285.00	20554.28	23.07
2018-19	61310468	23052735.96	3285.00	20554.28	23.07

4. The sum total of the projected water charges of Rs 23.07 lakh allowed in column-5 of the above table is corrected as Rs 230.76 lakh and the water charges allowed stands modified as under:



	<b>Projected Quantity Considered (KL) (1)</b>	<b>Pumping Charges (0.376₹/KL) (2)=(1)x0.376</b>	<b>Water cess (3)= (22995/7)</b>	<b>Water Consent Fee (4)= (143880/7)</b>	<b>Projected Water charge Allowed (₹ in lakh) (5)= (2)+(3)+(4)</b>
2014-15	61310468	23052735.96	3285.00	20554.28	230.76
2015-16	61310468	23052735.96	3285.00	20554.28	230.76
2016-17	61310468	23052735.96	3285.00	20554.28	230.76
2017-18	61310468	23052735.96	3285.00	20554.28	230.76
2018-19	61310468	23052735.96	3285.00	20554.28	230.76

5. Consequent upon the above, the O & M expenses in working capital undergoes revision as under:

### O & M expenses in working capital

(a) The table under para-51 of the order dated 8.3.2017 is modified as under:

(₹ in lakh)

<b>STAGE-I</b>					
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O&M expenses allowed	15057.00	16002.00	17010.00	18081.00	19221.30
Water Charges allowed	98.90	98.90	98.90	98.90	98.90
<b>Total O&amp;M expenses allowed</b>	<b>15155.90</b>	<b>16100.90</b>	<b>17108.90</b>	<b>18179.90</b>	<b>19320.20</b>

(₹ in lakh)

<b>STAGE-II</b>					
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O&M expenses allowed	20076.00	21336.00	22680.00	24108.00	25628.40
Water Charges allowed	131.86	131.86	131.86	131.86	131.86
<b>Total O&amp;M expenses allowed</b>	<b>20207.86</b>	<b>21467.86</b>	<b>22811.86</b>	<b>24239.86</b>	<b>25760.26</b>

### O & M expenses for 1 month

(b) The table under para-57 of the order dated 8.3.2017 is modified as under:

(₹ in lakh)

	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Stage-I	1262.99	1341.74	1425.74	1514.99	1610.02
Stage-II	1683.99	1788.99	1900.99	2019.99	2146.69

### Maintenance spares

(c) The table under para-60 of the said order dated 8.3.2017 is modified as under:

(₹ in lakh)

	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Stage-I	3031.18	3220.18	3421.78	3635.98	3864.04
Stage-II	4041.57	4293.57	4562.37	4847.97	5152.05



## Annual fixed charges

6. Based on the above correction, the annual fixed charges allowed for Stages – I and II of the generating station by order dated 8.3.2017 shall stand modified as under:

### Stage-I

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	729	733	733	733	733
Interest on Loan	0	0	0	0	0
Depreciation	0	0	0	0	0
Interest on Working Capital	4084	4152	4206	4272	4343
O & M Expenses	15156	16101	17109	18180	19320
Special Allowance	4365	4642	4937	5250	5584
<b>Total</b>	<b>24335</b>	<b>25628</b>	<b>26985</b>	<b>28436</b>	<b>29980</b>

### Stage-II

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	3342	3166	2974	2782	2590
Interest on Loan	0	0	0	0	0
Depreciation	975	975	975	975	975
Interest on Working Capital	5523	5608	5676	5760	5851
O & M Expenses	20208	21468	22812	24240	25760
Special Allowance	0	0	0	1894	6044
Compensation Allowance	735	840	840	630	210
<b>Total</b>	<b>30782</b>	<b>32057</b>	<b>33276</b>	<b>36281</b>	<b>41429</b>

7. Except for above, all other terms of the order dated 8.3.2017 remain unchanged.

**Sd/-**  
**(Dr. M.K.Iyer)**  
**Member**

**Sd/-**  
**(A. S. Bakshi)**  
**Member**

**Sd/-**  
**(A. K. Singhal)**  
**Member**

**Sd/-**  
**(Gireesh B. Pradhan)**  
**Chairperson**



**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 219/GT/2019**

**Coram:**

**Shri P.K.Pujari, Chairperson**

**Dr. M.K. Iyer, Member**

**Shri I.S.Jha, Member**

**Date of Order: 29<sup>th</sup> January, 2020**

**In the matter of**

Grant of interim tariff for Neyveli New Thermal Power Station (1000 MW) of NLC India Ltd for the period from anticipated COD of Units-I & II to 31.3.2021

**And**

**In the matter of**

Determination of tariff of Neyveli New Thermal Power Station (1000 MW) of NLC India Ltd for the period from anticipated COD of Units-I & II to 31.3.2021

**And**

**In the matter of**

NLC India Limited  
First Floor, No.8, Mayor Sathyamurthy Road,  
FSD, Egmore Complex of Food Corporation of India,  
Chetpet, Chennai - 600010

**...Petitioner**

**Vs**

1. Tamilnadu Generation and Distribution Corporation Ltd  
NPKRR Maaligai, 144 Anna Salai, Chennai - 600002

2. Andhra Pradesh Power Coordination Committee,  
Vidyut Soudha, Gunadula, Eluru Road,  
Vijawada,

3. Southern Power Distribution Company of Andhra Pradesh Ltd,  
D. No: 19-13-65/A, Srinivasapuram, Tiruchhanur Road,  
Tirupati (AP) - 517501

3. Eastern Power Distribution Company of Andhra Pradesh Ltd  
P&T Colony, Seethammadhara, Visakhapatnam (AP) - 530013

4. Transmission Corporation of Telangana Ltd  
Vidyut Soudha Khairatabad, Hyderabad - 500082



5. Northern Power Distribution Company of Telangana Ltd.  
H.No 1-1-504, Opp. NIT petrol pump  
Chaityanayapuri colony, Hanmkonda  
Warangal (Telangana) - 506004

6. Southern Power Distribution Company of Telangana Ltd  
2<sup>nd</sup> Floor, H.No. 6-1-50, Mint Compound  
Hyderabad - 500063

7. Power Company of Karnataka Ltd  
KPTCL complex, Kaveri Bhawan  
Bangalore - 560009

8. Bangalore Electricity Supply Company Ltd  
Krishna Rajendra Circle  
Bangalore - 560001

9. Mangalore Electricity Supply Company Ltd  
Corporate Office, MESCOM Bhavana, Bejai,  
Kavoor cross Road, Mangalore - 575004

10. Chamundeshwari Electricity Supply Company Ltd  
Corporate Office No. CA 29, Vijayanagar, 2<sup>nd</sup> Stage,  
Hinakal, Mysore-570017

11. Gulbarga Electricity Supply Company Ltd  
Station Main Road, Gulbarga  
Gulbarga- 585102, Karnataka

12. Hubli Electricity Supply Company Ltd  
Corporate Office, P.B Road, Navanagar  
Hubli - 580025

13. Kerala State Electricity Board Ltd  
Vaidyuthi Bhavanam, Pattom  
Thiruvananthapuram - 695004

14. Puducherry Electricity Department  
137, NSC Bose Salai  
Puducherry - 605001

...Respondents

**Parties present:**

Shri M.G.Ramachandran, Senior Advocate, NLC  
Ms. Anushree Bardhan, Advocate, NLC  
Shri J. Dhanasekaran, NLC  
Shri S.Vallinayagam, Advocate, TANGEDCO



## ORDER

The Petitioner, NLC India Limited (NLCIL) has filed this petition for determination of tariff of Neyveli New Thermal Power Station (2 x 500 MW) (hereinafter referred to as 'the Project/generating station') for the period from anticipated COD of Unit-I (July, 2019) and Unit-II (December, 2019) till 31.3.2024 in terms the provisions of the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2019 ('the 2019 Tariff Regulations').

2. The Petitioner is in the process of establishing the 2 x 500 MW, lignite fired, Neyveli New Thermal Power Station (NNTPS) at Neyveli. The Project was sanctioned by the Govt. of India on 9.6.2011 with a capital cost of ₹5907.11 crore (October, 2010 base price level) including IDC of ₹559.09 crore with FE component of ₹217.009 Mn US\$ @ 1US\$=44.69. The power from the Project has been allocated to the beneficiaries as per MOP, GOI letter dated 28.5.2011 and the Petitioner had entered into PPAs with the Respondent beneficiaries. The Petitioner has submitted that the anticipated COD of Unit-I is July, 2019 and Unit-II is December, 2019.

3. Petition No. 323/GT/2018 was earlier filed by the Petitioner for determination of tariff of the Project for the period from anticipated COD of Unit-I (October, 2018) and Unit-II (December, 2018). However, based on the submission of the Petitioner that the units were expected to achieve COD during the period 2019-24, the said Petition was disposed of with liberty to the Petitioner to approach the Commission from anticipated COD of the units in terms of the provisions of the 2019 Tariff Regulations. In terms of the liberty granted, the Petitioner has filed this petition for determination of tariff from the anticipated COD of Units till 31.3.2024.

4. The Petitioner has filed this petition in terms of Regulation 9(1) of the 2019 Tariff Regulations read with Regulation 3(6) of the Central Electricity Regulatory Commission



(Procedure for making of application for determination of tariff, publication of the application and other related matters) Regulations, 2004. Copies of the petition have also been served on the Respondents. Reply to the petition has been filed by the Respondent, TANGEDCO.

5. During the hearing of the petition on 12.9.2019, the learned counsel for the Petitioner submitted that as Unit-I was likely to achieve COD during September 2019, the Commission may consider the grant of interim tariff, pending determination of final tariff of the generating station. Accordingly, the Commission, after directing the Petitioner to file affidavit regarding the COD of the units, reserved its orders on the prayer of the Petitioner for grant of interim tariff. Pursuant to the directions of the Commission, the Petitioner has submitted that the COD of Unit-I is scheduled on or before 30.9.2019 and the COD of Unit-II in December, 2019.

6. The Petitioner has claimed capital cost of ₹300531.08 lakh as on the anticipated COD of Unit-I and ₹668526.66 lakh as on the anticipated COD of Unit-II/station. While the Petitioner has incurred the expenditure for the Project, the Respondent beneficiaries will be reaping the benefits of such expenditure by way of supply of power. In this background and in order to enable the Petitioner to meet its on-going financial obligations through reasonable recovery of cost of supply of electricity by the Petitioner, we consider the grant of interim tariff for the generating station for the period from the anticipated COD of the said Units till 31.3.2021, as discussed in the subsequent paragraphs.

### **Commissioning schedule**

7. The scheduled COD of the Units as per Investment Approval dated 9.6.2011 and the anticipated COD of the units, as submitted by the Petitioner is as under:

Unit No	Original schedule as per GOI sanction dated 9.6.2011	Anticipated COD	Time overrun (months)
I	9.6.2015	September, 2019	51
II	9.12.2015	December, 2019	48



8. It is observed that there is time overrun of 51 months and 48 months till the anticipated COD of Units I & II respectively from the scheduled COD, as per Investment approval of Govt. of India dated 9.6.2011.

### **Time & Cost overrun**

9. The Petitioner has submitted the reasons for the delay in the commissioning of the units with respect to their anticipated COD, mainly as under:

- (i) Tender stage delay;
  - (a) Tender for 500 mw lignite based power plant;
  - (b) NLCIL initiatives for early award of the tender and impediments thereof;
- (ii) Enhancement of completion period by 6 months for NTA 1 package;
- (iii) Execution delay due to Force Majeure and technological issues/hindrances; and
  - (a) Delay due to Force Majeure:**
    - (i) Flood, heavy rain and inundation of the project site and logistical hindrance due to such disaster in Tamil Nadu;
    - (ii) Sand Quarry closure;
    - (iii) GST Implementation;
  - (b) Execution delay due to technological issues/surprises.**
    - (i) Requirement of Steel;
    - (ii) Requirement of Specialized material (E350 & E450);
    - (iii) Shortage of main steel structures;
    - (iv) Requirement of fabrication facilities for the heavy structure (i.e. size 2400 X 2400mm);
    - (v) Material transportation;
    - (vi) Specialized welding joints;
    - (vii) Non-availability of skilled labour;
    - (viii) Flue Gas Duct (FGD);
    - (ix) Flue Gas Duct needed to be facilitated with higher hanging elevation supports (56 -116 meter level);
    - (x) Flue Gas Recirculation System (FGRS) & Firing system;
    - (xi) Milling system;
    - (xii) High elevation wind velocity due to Tower type boiler; and
    - (xiii) Requirement of higher capacity (600 T) crane based on wind velocity.





**(c) NTA-3 Package-Balance of Plant -Insolvency Issues**

- (i) LOA has been issued to M/s EPC Constructions India Limited-EPCCIL Mumbai, for balance of Plant (NTA-3) package on 30.04.2014;
- (ii) Extension of time (referred to as EOT) schedule; and
- (iii) Insolvency issue

**(d)** Unit-I was synchronized with grid on 28.3.2019, with secondary fuel oil. However, Unit got tripped on protection on the same day and was shut down in order to carry out the following major activities for lignite firing so as to achieve COD;

10. The Respondent, TANGEDCO and PCKL vide their replies dated 25.9.2019 & 3.12.2019 respectively have mainly submitted that the reasons furnished for time overrun are attributable to the Petitioner and the same may not be accepted. They have also submitted that the cost overrun of the project is due to inefficiencies of the Petitioner and the Respondents cannot therefore be burdened on this count. The Respondents have also requested that the capital cost of the project may be allowed only on prudence check.

11. In our considered view, the question of time and cost overrun involved in the completion of the project and its impact on capital cost is required to be considered in detail, only after hearing the parties on merits, at the time of determination of final tariff of the generating station. Hence, the question of time and cost overrun has not been considered in this order.

**Capital Cost**

**Approved Capital Cost**

12. As stated, the original sanctioned cost of the project is ₹5907.11 crore at October, 2010 price level including IDC of ₹559.09 crore and FE component of ₹217.009 million US \$ (1 US \$ = ₹44.69). The hard cost of the project was ₹5348.08 crore, excluding IDC (about ₹5.34 crore/MW). The project cost was revised and RCE-I was approved by the Board of Directors in its 479<sup>th</sup> meeting dated 28.5.2018. Accordingly, the revised project cost is ₹7080.41 crore, including IDC of ₹772.78 crore.



## Revised Cost Estimate (RCE-II)

13. The Petitioner has submitted that the RCE-II for ₹779277.96 lakh including IDC, FC, FERV & Hedging cost of ₹108075.74 lakh is yet to be approved by the Competent Authority.

14. The capital cost claimed by the Petitioner as on the anticipated COD of Units-I & II in Form 1(i) of the Petition for 2019-21 is as under:-

	2019-20		2020-21
	Unit I	Units-I & II	
Capital Cost	300531.08	666463.83	668322.86
Additions during the year/ period	-	-	45634.14
Closing Capital Cost	300531.08	666463.83	713957.01

15. The capital cost of ₹666463.83 lakh claimed as on the anticipated COD of the generating station is higher than the original Investment approval cost of ₹590711.00 lakh and is lower than the revised cost of ₹708041.00 lakh. Further, the Petitioner vide its affidavit dated 15.11.2019 has furnished the audited balance sheets for the period 2011-12 to 2018-19 and audited Form-B indicating the capital cost of ₹614809.10 lakh as on 30.9.2019 (revised anticipated COD of Unit-I) including IDC, FC, FERV & Hedging cost of ₹101990.15 lakh.

### Capital cost for purpose of interim tariff

16. The Petitioner has furnished the actual capital expenditure for ₹583305.91 lakh as on 31.5.2019, in Part-I, Form-B of the petition, duly certified by auditor. The projected capital expenditure up to COD of the generating station, as certified by auditor, is ₹57971.68 lakh. Further, the Petitioner vide its affidavit dated 15.11.2019, has furnished the audited balance sheet for the period from 2011-12 to 2018-19. The Petitioner has also furnished the audited Form-B showing the capital cost of ₹614809.10 lakh as on 30.9.2019, including IDC, FC, FERV & Hedging cost of ₹101990.15 lakh. Further, the total



capital expenditure upto the COD of the generating station is ₹668526.66 lakh, including IDC, FC, and FERV & Hedging cost for ₹108075.74 lakh in Form-B.

17. The approved Revised Cost Estimate (RCE-I) is ₹708041.00 lakh. There is an increase in the project cost of ₹117330 lakh which is 19.86% of the Investment approval i.e. ₹ 590711 lakh. However, the approved RCE of ₹708041.00 lakh is higher than the audited capital expenditure of ₹614809.10 lakh as on 30.9.2019 (revised anticipated COD of Unit-I) and the projected capital expenditure as on station COD is ₹668526.66 lakh. The Petitioner has submitted that out of total increase of ₹1173.30 crore in project cost, ₹ 416.25 crore is on account of installation of FGD to comply with the environmental norms; ₹518.21 crore is on account of GST, contribution of IDC and overhead due to time overrun is ₹213.75 crore & ₹121.93 crore respectively. Further, the Petitioner has also accounted the saving from sub-packages for ₹66.34 crore and the revenue earned from sale of infirm power for ₹30.50 crore. The cost of FGD was not envisaged at the time of investment approval and the same has been incorporated at the time of approval of RCE-I.

18. The delay in COD of both the units/station has increased the hard cost, IDC, IEDC etc. of the Project. The Petitioner vide affidavit dated 14.11.2019 has furnished certified Form-B indicating the capital cost as on COD (revised) of Unit-I (30.9.2019) and the anticipated COD of Unit-II (31.12.2019). Considering the fact that the Project involves significant time and cost overrun, we grant interim tariff for the period from anticipated COD of Units I & II till 31.3.2021, considering 85% of the audited capital cost as on the anticipated COD of Units I & II, pending determination of final tariff of the generating station from the actual COD of the units for the period 2019-24, as under:



(₹ in lakh)

	Unit-I as on anticipated COD (30.9.2019)	Unit- II (station) as on anticipated COD (31.12.2019)
Capital cost excluding IDC	256409.48	560450.92
IDC, FC, FERV & Hedging cost	50995.07	108075.74
Capital cost including IDC, FC, FERV & Hedging cost	307404.55	668526.66
85% of audited capital cost	261293.87 (307404.55 x 0.85)	568247.66 (668526.66 x 0.85)
<b>Capital cost considered for interim tariff</b>	<b>261293.87</b>	<b>568247.66</b>

### Additional Capital Expenditure

19. The Petitioner has not claimed any projected additional capital expenditure for the said period. However, any claim for additional capitalization later, shall be considered on prudence check, at the time of determination of final tariff of the generating station.

### O&M Expenses

20. The Petitioner has claimed total O&M expenses including Water Charges and Security expenses for the period 2019-21 as under:

(₹ in lakh)

	2019-20		2020-21
	Unit-I	Units-I & II	
Normative O&M expenses	11255.00	22510.00	23300.00
Water Charges	235.64	471.28	471.28
Security Expenses	331.00	662.00	729.00
<b>Total O&amp;M expenses</b>	<b>11821.64</b>	<b>23643.28</b>	<b>24500.28</b>

21. The normative O&M expenses have been allowed in terms of Regulation 35(1)(1) of the 2019 Tariff Regulations. The Petitioner has claimed water charges consisting pumping charges, personnel charges deputed for the O&M of pumping station and Consent fees paid to the State Government. In the absence of any contracted quantity of water, we have considered the specific water consumption as per CEA norms for 500 MW unit size. Since the claim of the Petitioner is on projection basis and in the absence of actual figures of water consumption, the annual water consumption is restricted to 30.66 million KL per annum for the period 2019-21. The Petitioner has not furnished the basis of the pumping charges and personnel charges deputed for O&M of pumping station, however we



have allowed these at ₹0.376/ KL and ₹0.62/KL respectively as claimed by the Petitioner, for the said period. Since consent fee is a statutory obligation to be deposited to the State authorities by the Petitioner, we allow the same as claimed by the Petitioner.

### Security Expenses

22. As per Regulation 35(1)(6) of the 2019 Tariff Regulations, security expenses for thermal generating stations are to be allowed separately, after prudence check. The Petitioner has claimed ₹662 lakh towards security expenses for 2019-20 and escalated @ 9% annually for the period 2020-21 onwards. The Petitioner has neither furnished any justification for escalation nor the basis for working out the security expenses claimed. Considering the fact that the claim of the Petitioner is on projection basis, we have restricted the claim of the Petitioner to the actual expenditure incurred in 2019-20 i.e. ₹662.00 lakh.

23. Based on the above, the total O&M expenses, including Water Charges and Security expenses allowed for the period 2019-21 are summarized as under:

	<i>(₹ in lakh)</i>		
	2019-20		2020-21
	Unit-I	Units-I & II	
O&M Expenses	11255	22510	23300
Water Charges	235.64	443.11	443.11
Security Expenses	331.00	662.00	662.00
<b>Total O&amp;M Expenses</b>	<b>11821.64</b>	<b>23615.11</b>	<b>24405.11</b>

24. The Water charges and Security expenses allowed as above are subject to revision based on proper justification and documentary evidence to be furnished by the Petitioner on affidavit, at the time of determination of final tariff of the generating station.

### Operational norms

25. The Petitioner has considered the following operational norms for the purpose of tariff:



Normative Annual Plant Availability Factor (NAPAF) (%)	85
Gross Station Heat Rate (without correction factor) (kcal/kWh)	2598.75
Auxiliary Power consumption (%)	6.25
Specific Oil Consumption (ml/kWh)	1.00

26. NAPAF of 85% as claimed by the Petitioner in terms of the 2019 Tariff Regulations is allowed. The Petitioner has claimed Gross Station Heat Rate (GSHR) of 2598.75 (1.05 x 2250 x 1.1) kCal/kWh. The guaranteed gross turbine cycle heat rate and boiler efficiency is 1929.3 kCal/kWh and 89.79% respectively. Further, the Petitioner has submitted the proximate analysis report of lignite sample wherein moisture content works out to 1.1%. Accordingly, the Station Heat Rate (SHR) has been worked out to 2481.725 (1.05 x 1.1 x 1929.3/0.8979) kCal/kWh. The GSHR based on Boiler Efficiency & Turbine Cycle Heat Rate works out to 2481.725 kCal/kWh, which is lower than the maximum allowable design heat rate of 2598.75 kCal/kWh as claimed by the Petitioner. Accordingly, the GSHR of 2481.725 kCal/kWh is allowed. The Auxiliary Power Consumption (APC) of 6.25% as claimed by the Petitioner in terms of Regulation 49(E)(d)(i) of the 2019 Tariff Regulations is allowed. However, the prayer of the Petitioner for relaxation of APC shall be considered on merits, at the time of final determination of tariff of the generating station. The specific fuel oil consumption of 1.0 ml/kWh claimed in terms of Regulation 49(D)(b)(i) of the 2019 Tariff Regulations is allowed.

### **Lignite Transfer Price**

27. The Petitioner has submitted that the Lignite transfer price has been adopted in accordance with the guidelines of the Ministry of Coal, GOI. The Petitioner has considered the Pooled Lignite Transfer price of ₹2132.239 per kg, which is lower than the approved rates of the lignite based on MOC guidelines. Accordingly, for the purpose of interim tariff, the lignite transfer price of ₹2132.239 per kg is allowed. However, the same is



subject to revision in accordance with the lignite transfer prices notified by the Commission.

### Cost of Lignite in Working Capital

28. The claim of the Petitioner for cost of lignite for 40 days (10 days cost of primary fuel towards stock and 30 days advance payment of primary fuel cost at the normative annual plant availability factor) in terms of Regulation 34(a)(i)&(ii) of the 2019 Tariff Regulations, is allowed.

29. Based on the above, the operational norms allowed for the purpose of interim tariff for 2019-21 is summarised as under:

NAPAF	%	85
APC	%	6.25
GSHR (with 1.1 correction factor)	kCal/kWh	2481.725
Specific Fuel Oil Consumption	ml/kWh	1.00
Cost of lignite towards stock	in days	10
Cost of lignite towards Generation	in days	30
Cost of Main Secondary Fuel Oil	in months	2.00

### Fuel Cost and Energy Charges in Working Capital

30. The Petitioner has claimed the following cost of fuel component in working capital:

	(₹ in lakh)		
	2019-20		2020-21
	Unit-I	Units-I & II	
Cost of Lignite towards stock	2161.28	4322.56	4322.56
Cost of Lignite towards Generation	6483.85	12967.69	12967.69
Cost of Secondary fuel oil	289.77	579.54	577.95

31. In case of the generating stations of the Petitioner, the price of fuel for preceding three months i.e. January, 2019, February, 2019 and March 2019 means the pooled price of the lignite for the year 2018-19. The pooled lignite transfer price for the 2018-19 as allowed by the Commission in the order dated 8.3.2017 in Petition No. 256/GT/2014 was ₹ 2821/ton. Hence, the weighted average price of lignite is ₹2132.24/ton and GCV of 2610 kCal/kWh has been considered by the Petitioner for the period 2019-24, which is lower than the approved pooled lignite transfer price. The said price of ₹2132.24/ton is



allowed for calculating the Energy Charges. Based on this, the cost for fuel components in working capital and 2 months of Energy Charge is worked out and allowed as under, for the purpose of interim tariff:

	(₹ in lakh)		
	2019-20		2020-21
	Unit-I	Units-I & II	
Cost of lignite towards stock (10 days)	2065.09	4118.89	4118.89
Cost of lignite towards generation (30 days)	6195.26	12356.67	12356.67
Cost of Secondary fuel oil	267.29	534.58	533.12

32. Energy charges for 2 months (coal+ oil) is worked out as under:

(₹ in lakh)		
2019-20		2020-21
Unit-I	Units-I & II	
12829.96	25659.93	25589.82

### Annual Fixed Charges

33. Accordingly, the interim fixed charges allowed for the generating station for the period 2019-21 is summarised as under:

	(₹ in lakh)		
	2019-20		2020-21
	Unit-I	Units-I & II	
Return on Equity	15487.93	33682.31	33682.31
Interest on Loan	15305.42	32140.73	29650.90
Depreciation	13216.24	28679.46	28679.46
Interest on Working Capital	4708.90	8056.09	9553.51
O&M Expenses	11801.79	23603.57	24393.57
<b>Total fixed Charges (annualized)</b>	<b>60520.29</b>	<b>126162.17</b>	<b>125959.75</b>

34. The interim fixed charges granted above are subject to adjustment after determination of final tariff of the generating station from the actual COD of the units till 31.3.2024.

### Energy Charge Rate

35. The Petitioner has claimed Energy Charge Rate (ECR) ex-bus of ₹2.310 per kWh based on fuel cost and GCV for the month. ECR has been worked out based on the





operational norms as per the 2019 Tariff Regulations and Price & GCV of primary & secondary fuels as adopted by the Commission and allowed as under:

Description	Unit	2019-20	
		Unit-I	Units-I & II
Capacity	MW	(1x500) = 500	(2x500)=1000
Gross Station Heat Rate	Kcal/kWh	2481.725	2481.725
Auxiliary Power Consumption	%	6.25	6.25
Weighted average GCV of oil	Kcal/lit	10260	10260
Weighted average GCV of Lignite	Kcal/kg	2610	2610
Weighted average price of oil	Rs/KL	42958.90	42958.90
Weighted average price of Lignite	Rs/MT	2132.25	2132.25
Rate of Energy Charge (ex-bus)	Rs/kWh	2.200	2.200

36. The price of lignite considered as above is subject to adjustment in terms of Regulation 36 of the 2019 Tariff Regulations. ECR, on month to month basis, shall be calculated as per Regulation 43(2)(a) of the 2019 Tariff Regulations.

37. It is noticed that Unit-I of the generating station has been declared under commercial operation on 28.12.2019. The Petitioner shall amend the tariff petition taking into consideration the actual COD of the units of the generating station, with copy to the Respondents.

**Sd/-**  
**(I.S.Jha)**  
**Member**

**Sd/-**  
**(Dr.M.K.Iyer)**  
**Member**

**Sd/-**  
**(P.K.Pujari)**  
**Chairperson**



**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 277/GT/2014**

**Coram:**

**Shri Gireesh B. Pradhan, Chairperson  
Shri A.K. Singhal, Member  
Shri A.S. Bakshi, Member  
Dr. M.K. Iyer, Member**

**Date of Order: 11 July, 2017**

**In the matter of**

Approval of tariff of Vallur Thermal Power Station (3 x 500 MW) for the period 2014-19

**In the matter of**

NTPC Tamil Nadu Energy Company Limited  
No. 123, G- Block, Anna Nagar (East)  
Chennai- 600102

**...Petitioner**

Vs

1. Transmission Corporation of Andhra Pradesh Ltd.  
Vidyut Soudha, Khairatabad,  
Hyderabad - 500 082.
2. Southern Power Distribution Company of A.P. Ltd.  
D.NO:19-13-65/A Srinivasapuram,  
Tiruchanoor Road Tirupathi- 517 501
3. Eastern Power Distribution Company of A.P. Ltd.  
P&T Colony, Seetammadhara,  
Vishakapatnam - 503 013
4. Transmission Corporation of Telangana Ltd.  
Vidyut Soudha Khairatabad,  
Hyderabad - 500 082
5. Northern Power Distribution Company of Telangana,  
H.No. 1-1-504, Opp. NIT petrol Pump,  
Chaityanayapuri colony, Hanmkonda,  
Warangal - 506 004
6. Southern Power Distribution Company of Telangana  
2nd Floor, H. No. 6-1-50, Mint Compound,  
Hyderabad-500 063
7. Power Company of Karnataka Limited  
KPTCL Complex, Kaveri Bhawan,  
Bangalore - 560 009
8. Bangalore Electricity Supply Company Ltd  
Krishna Rajendra Circle, Bangalore-560 001
9. Mangalore Electricity Supply Company Ltd  
Paradigm Plaza, A.B. Shetty Circle,  
Mangalore-575 001



10. Chamundeshwari Electricity Supply Co. Ltd.,  
Corporate Office No. 927, L.J. Avenue,  
New Kantharaj Urs Road Saraswathipuram,  
Mysore - 570 009

11. Gulbarga Electricity Supply Company Ltd.,  
Main Road, Gulbarga, 585102

12. Hubli Electricity Supply Company Ltd.  
Corporate office, P.B. Road, Navanagar  
Hubli - 580 025

13. Kerala State Electricity Board  
Vaidyuthi Bhavanam, Pattom  
Thiruvananthapuram - 695 004

14. Tamil Nadu Generation & Distribution Corporation Ltd.  
144, Anna Salai,  
Chennai - 600 002

15. Electricity Department,  
Government of Puducherry,  
137, NSC Bose Salai,  
Puducherry-605 001

**Parties present:**

Shri M.G. Ramachandran, Advocate, NTECL  
Ms. Poorva Saigal, Advocate, NTECL  
Shri Nishant Gupta, NTECL  
Shri Patanjali Dixit, NTECL  
Shri Rohit Chahabra, NTECL  
Shri S. Vallinayagam, Advocate, TANGEDCO

**ORDER**

This petition has been filed by the petitioner, NTPC Tamil Nadu Energy Company Limited (hereinafter 'NTECL'), a joint venture company of NTPC and Tamil Nadu Electricity Board, for approval of tariff of Vallur Thermal Power Project (3 x 500 MW) ('the generating station') for the period 1.4.2014 to 31.3.2019 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (referred to as "the 2014 Tariff Regulations").

2. The investment approval of the project was accorded on 14.7.2007 by the Board of the Petitioner company for Stage-I, Phase-I comprising of two units of 500 MW at a cost of ₹5552.78 crore and Phase-II comprising of one unit of 500 MW at a cost of ₹3086.78 crore on 19.5.2009. The petitioner has entered into Power Purchase Agreement (PPA) with the respondents herein for supply of power generated from the project to the respondents in terms of the allocation made by the Ministry of Power, Government of India vide letter dated 28.9.2010.



3. The generating station with a capacity of 1500 MW comprises of two units of 500 MW each in Phase-I and one unit of 500 MW in Phase-II. The dates of commercial operation of the units of the generating station are as under:

Unit-I	29.11.2012
Unit-II	25.8.2013
Unit-III	26.2.2015

4. The Commission vide order dated 8.2.2016 in Petition No.198/GT/2013 had approved the tariff of the generating station from the date of COD of Unit-I (29.11.2012) to 24.8.2013 and for Units- I and II (combined) from the COD of Unit-II (25.8.2013 ) to 31.3.2014. Aggrieved by the said order dated 8.2.2016, the petitioner had filed review petition (Petition No. 28/RP/2016) on various issues and the Commission vide order dated 18.4.2017 had disposed of the same, revising the tariff of Units-I and II of the generating station. Accordingly, the annual fixed charges determined vide order dated 18.4.2017 is as under:

(₹ in lakh)

	2012-13		2013-14	
	29.11.2012 to 31.3.2013		1.4.2013 to 24.8.2013	
	123 days		146 days	
	1 Unit		1 Unit	
Return on Equity	4608.81	5564.20	14910.91	25.8.2013 to 31.3.2014
Interest on Loan	8776.71	10408.64	25412.02	219 days
Depreciation	5379.78	6560.17	16452.66	2 Units
Interest on Working Capital	1412.82	1658.53	6576.92	
O&M Expenses	2580.98	3248.00	9744.00	
Secondary fuel oil cost	618.83	736.56	2114.02	
<b>Total annual fixed charges</b>	<b>23377.94</b>	<b>28176.10</b>	<b>75210.54</b>	

5. The opening capital cost as on 1.4.2014 and 26.2.2015 and the annual fixed charges for the period 2014-19 claimed by the petitioner are as under:

#### Capital cost

(₹ in lakh)

	1.4.2014 to 25.2.2015	26.2.2015 to 31.3.2015
Opening Capital Cost on Cash basis	577317	852103.56
Notional IDC capitalised as on 31.3.2014	6445.34	1241.76
Additional capitalization	71.03	1551.20
Liabilities Discharged	8103.17	7288.91
<b>Closing Capital cost</b>	<b>591936.57</b>	<b>862185.43</b>



## Annual Fixed charges

(₹ in lakh)

	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 25.2.2015	26.2.2015 to 31.3.2015				
Return on Equity	27335.00	39886.09	52955.15	56401.27	58374.99	59134.21
Interest on Loan	42158.70	62054.08	62322.62	61487.68	58573.12	53890.98
Depreciation	29234.76	43216.25	45350.08	48449.86	50038.23	50644.74
Interest on Working Capital	9859.41	14735.04	15188.11	15386.50	15506.09	15540.87
O&M Expenses	16441.00	23641.00	25200.91	26714.33	28398.75	30186.60
Secondary fuel oil cost	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total annual fixed charges</b>	<b>125028.87</b>	<b>183532.46</b>	<b>201016.87</b>	<b>208439.64</b>	<b>210891.19</b>	<b>209397.40</b>

6. The petition was heard on several dates and the Commission after hearing the matter on 16.2.2016 reserved orders in the petition after directing the petitioner to submit certain additional information vide record of proceedings of the said hearing. In compliance with the said directions, the petitioner has submitted the additional information and has served copies on the respondents. The respondents, KSEB and TANGEDCO have filed their replies and the petitioner had filed its rejoinder to the said replies. Based on the submissions of the parties and documents available on record, we proceed to determine the tariff of the generating station, on prudence check, as stated in subsequent paragraphs.

### Schedule of Commissioning

7. The scheduled COD and the actual COD of the three units of the generating station are as under:

Unit Nos.	Date of LOA	Schedule COD as per LOA	Actual COD	Time Overrun (in months)
I	13.8.2007	10.2.2011	29.11.2012	21.63
II		10.8.2011	25.8.2013	24.53
III	28.7.2009	27.1.2013	26.2.2015	25.0

8. The Commission in order dated 8.2.2016 had examined the issue of time overrun in respect of Units-I and II and had allowed the time overrun of 16 months for Unit-I and 18 months for Unit-II of the generating station. Hence, the time overrun in respect of Unit-III of the generating station has only been considered in this order.

9. The investment approval for Unit-III of the generating station was approved in May 2009 and the main plant for Unit-III was awarded on 28.7.2009 (zero date). The schedule date for



declaration of commercial operation of Unit III was 27.1.2013 and the actual date of COD of Unit-III is 26.2.2015, thereby resulting in the delay of 25 months.

### **Admissibility of Additional Return on Equity**

10. In terms of the provisions of the 2014 Tariff Regulations, the timeline specified for completion of different units of green field projects (Coal/lignite) with a unit size of 500 MW from the date of investment approval is 42 months for first unit and thereafter, at an interval of 6 months each for subsequent units. The actual COD of Unit-III/ generating station is 26.2.2015 and the date of investment approval is May, 2009. Thus, the time taken for COD of Unit-III is 69 months from the date of Investment approval which is beyond the timeline of 54 months as specified under the 2014 Tariff Regulations. Accordingly, the generating station is not entitled to Additional Return on Equity of 0.5% for timely completion in terms of the 2014 Tariff Regulations.

### **Time and Cost Overrun**

11. As stated above, the time overrun in case of Unit-III is 25 months as the COD of the said unit is 26.2.2015 as against the schedule COD of 27.1.2013 and the same is being examined in this order. The petitioner vide affidavit dated 18.8.2014 has furnished the reasons for time overrun. However, the Commission vide ROP of the hearing dated 16.2.2016 had directed the petitioner to furnish details with respect to the delay in the COD of Unit-III and also for clarification as to whether there was any overlapping of time overrun due to common activities with regard to other units. In compliance with the above directions, the petitioner vide affidavit dated 3.5.2016 has furnished the major reasons for time overrun of Unit-III as detailed under:

<b>Sl No</b>	<b>Period</b>	<b>Total months</b>	<b>Reasons for the delay</b>
1.	November, 2010 to June, 2011	8	On account of cyclone JAL
2.	December, 2011 to August, 2012	8	On account of cyclone THANE
3.	September, 2012	1	On account of civil contractor M/s Gammon
4.	July, 2014 to February, 2015	8	On account of NGT ban on Earth quarrying

### **Delay due to Cyclones (JAL & THANE)**

12. The petitioner has submitted that two cyclones namely JAL in November, 2010 and THANE in December, 2011 had affected the progress of the work adversely leaving behind a trail of



devastation. Accordingly, the submissions of the petitioner under this head are summarized as under:

- (a) Cyclone and heavy rainfall has created huge impact on the infrastructure like approach road, construction, supply etc. for carrying out the project activities. The approach roads were completely washed away and this caused problems in movement of the trucks affecting the delivery of materials to the site, movement of material handling equipments like hydra, cranes etc affecting the progress of the work. This has brought down the project works to a standstill.
- (b) While the material supply was affected due to damage to the approach road on one hand, the manpower was completely de-mobilized due to cyclones and heavy rainfall on the other hand. The project is situated in close proximity to sea and hence aftermaths of cyclones are hugely felt in the project premises. The Cyclones have caused severe damages to the temporary sheds of contracts & the labor colony. The heavy rainfall accompanied by cyclone has resulted in flooding of labor colony necessitating the laborers to be mobilized to safe locations. NTECL took swift action in ensuring that the laborers were rescued to safer locations by collaborating with the agencies. However, on account of panic that was caused during that time, lot of laborers left to their home towns and it took lot of time to re-mobilize the laborers to the site back to work.
- (c) In addition to the damage caused to the labor colonies, severe damage also happened to the established infrastructure inside the site premises such as failure of construction supply due to falling of electrical poles carrying HT lines. Power supply was affected causing added difficulties in accomplishing rescue operations. Also, in order to bring the labor back to the site, labor colonies were to be re-built to provide safe accommodation to the laborers which also took lot of time on its part. To re-build the labor colonies, water logging happened on account of heavy rainfall needed to be de-watered. All these activities took lot of effort and time for NTECL such that project works almost came to standstill condition for a period of 08 months each for cyclone JAL and THANE. The newspaper clippings showing the damage caused by the cyclones in the city of Chennai is annexed in Annexure IV a of the petition.
- (d) All the structural works in the generating station were fabricated in the fabrication yard set up in premises of the generating station. The fabrication yards were completely washed away and the activities were affected thereby causing delay in completion of structural and thereafter subsequent civil works.
- (e) The unprecedented rains in 2010 and 2011 had a monthly maximum rainfall of 418 mm and 637mm respectively. There was huge water logging and flooding during periods of



heavy rainfall. All the civil foundation works which were started and in their early stages were completely water logged. The water logged areas were to be de-watered to commence the works but since all the surrounding areas were also water logged, there was no way out for the water to be de-watered to other areas. This process of de-watering the complete water logged areas and then preparing the foundation area for carrying out further civil works took a lot of time.

- (f) The boiler erection work of Unit-III was hugely affected due to JAL in November 2010 and this has caused delay of 08 months for completion of the activity.
- (g) There was a delay of 16 months in completion of TG deck and TG foundation works on account of cyclones and incessant rainfall in 2010 (8 months) and 2011 (8 months). This has caused delay of about 13 months in commencement of condenser erection works and 16 months in commencement of TG erection works, both being parallel activity was however completely dependent on the casting of TG deck & TG civil foundation works.
- (h) In case of completion of TG foundations, the civil contractor could not recover from the damage caused by cyclones and rainfall since civil works are the most affected works in case of natural calamities. The momentum with which the work has to progress, especially civil works, could not be regained after the devastating effects of cyclones. The civil contractor required a lot of time and energy in order to bring the condition to normal and thereafter commence the works such as re-establishing the labour colony, bringing the de-mobilized manpower to site, de-watering the foundation works, removing the debris etc and after all these works were completed and when the situation was brought back to workable condition, only then further works could be taken up. As stated above, the devastation caused by the cyclone/heavy rainfall and its impact in bringing the site conditions to the point where work could be taken up again was huge.
- (i) There is a delay of 17 months in actual synchronization with respect to scheduled date of synchronization. As stated above, 16 months of delay is attributable to cyclones and heavy rainfall and 1 month delay in completion of boiler foundations is attributable to the poor performance of the contractor.

### **Delay by Civil Contractor (1 Month)**

13. The petitioner has submitted that in case of Unit-III the civil foundation works were progressing at a rapid pace and hence the delay at site activities due to effect of cyclones and rainfall were hugely felt or impacted at Unit-III. It has however submitted that in order to comply with the time schedule by increasing the pace of work to compensate for the time lost, the





petitioner has expressed deep concerns about progress of civil works to M/s Gammon India Ltd. several times. The petitioner has also submitted that even after a lot of reviews, follow-ups and deliberations at top management level, M/s Gammon India Ltd. could not speed up the pace of progress of work. The petitioner had insisted the civil contractor that the condenser and turbine erection works could be taken up only after casting of TG Deck and sought the personal intervention to ensure that no further delays happen. Accordingly, the petitioner has submitted that it has taken best efforts to bring back the project as close as possible to the scheduled timeline. However, despite the efforts of the petitioner the delay could not be compensated due to the above said uncontrollable reasons not attributable to the petitioner. The petitioner has submitted that in addition to the delay caused due to cyclone and incessant rainfall, there has been minor delays in completion of specific milestones on account of contractor such as boiler pressure parts erection, acid cleaning, etc. However, the same is compensated by exceptionally high performance in activities like steam blowing for which 50 days has been envisaged as schedule duration but completed in 19 days. Accordingly, the petitioner has submitted that the major delay causing time overrun in achieving synchronization of Unit-III was on account of cyclones and unprecedented rainfall in 2010 and 2011 which is completely beyond the control of the petitioner.

#### **National Green Tribunal ban on Earth quarrying (8 months)**

14. The petitioner has submitted the following causes of delay under this head:

(a) The delay of 8 months was due to ban on earth quarrying by National Green Tribunal (NGT) vide order dated 28.3.2014 which resulted in the non-issuance of Environment Clearance (EC), which is a pre-requisite for digging/quarrying. All this had ultimately stopped the Ash dyke works and consequently delayed the declaration of COD of Unit-III. NGT finally lifted the restriction of the issuance of EC by SEIAA vide order dated 13.1.2015. Consequent upon this EC was issued on 11.2.2015 for mining / excavation of earth to be used for ash dyke works at the project. Subsequently, allout efforts were made and Unit-III was declared under commercial operation on 26.2.2015. Thus, the stoppage of earth quarrying from July, 2014 to February, 2015 resulted in a delay of 8 months which was beyond the control of the petitioner.

15. The petitioner has submitted that there was no overlapping of time overrun in Unit-III due to common facilities with respect to Units I and II. It was also submitted that the time overrun in



Unit-III was due to reasons exclusive in Unit-III only thereby affecting the main plant works (TG and boiler works) of Unit-III only. In response to the directions in ROP of the hearing dated 10.7.2015, the petitioner has submitted that the declaration of COD of Unit-III got delayed upto 25 months considering a delay of 16 months in TG & condenser erection and 9 months delay is attributed to the delay in declaration of COD alone. It has further submitted the following reasons for delay from synchronization to COD of Unit-III.

- a) Unit-III was synchronized and commissioned on 28.2.2014. After assessing the progress of works, the petitioner initially planned to declare the commercial operation of Unit III within 6 months of initial synchronization i.e 28.8.2014. However, despite the best efforts by the petitioner, COD could not be declared due to delay in completion of 'In plant coal handling system' for bunkering coal for regular operation.
- b) The petitioner had filed miscellaneous petition seeking permission for injection of infirm power beyond six months i.e. 28.8.2014 from the date of initial synchronization for a period of three months beyond 28.8.2014 in terms of Regulation 8 (7) of the CERC (grant of connectivity and long term access and medium term open access in interstate transmission and related matters) Regulations 2009 as amended from time to time.
  - i. Coal Handling System contract was awarded to M/s BHEL ISG on 29.3.2010 and as per contract all the facilities related to Units I, II and III were to be completed by November, 2011, May, 2012 and November, 2012 respectively.
  - ii. M/s BHEL-ISG has sub-contracted various works relating to 'In plant CHP' package to M/s Tecpro (Mechanical Works), M/s CGL (Electrical) and M/s Prasad & Co (Civil/Structural works).
  - iii. The progress of the work was unsatisfactory even after a lot of reviews and follow ups. On 10.1.2014 the petitioner communicated to M/s BHEL-ISG intimating slow progress of work in all areas of CHP due to issues of BHEL with their sub-agencies. The agency M/s Tecpro had practically stopped working due to various internal problems.
  - iv. On 25.2.2014, the petitioner intimated BHEL about the planned commissioning of Unit III in February 2014 and made a specific remark that BHEL-ISG is not able to take up erection activities due to non-availability of materials and erection agencies and insisted to deploy erection agency on war footing to complete the system latest by May 2014 to facilitate declaration of commercial operation of the unit.
  - v. As the progress of the work was not satisfactory and the unit was already commissioned, a meeting was held at M/s BHEL- ISG office on 14.03.2014 to discuss the execution status of In-plant Coal Handling system. The petitioner pointed out that its Unit III is synchronized on 28.2.2014 and was targeting COD in July 2014. It was also pointed out that trial operation of the unit needs to be completed before



COD for which all associated facilities of CHP was required to be completed latest by June, 2014.

- vi. Subsequently on 26.3.2014, M/s BHEL - ISG had terminated erection contract with M/s Tecpro citing reasons of non-performance and delay in completion of project as per schedule. Further, M/s BHEL - ISG decided to award the pending works to other agencies.
- vii. On 25.4.2014, the petitioner emphasized BHEL-ISG that as per CERC's Regulations, COD is to be declared within six months otherwise there could be issues relating to injection of infirm power.
- viii. After highlighting and representing the issues in various forums, M/s. BHEL- ISG finally awarded the erection works of CHP In plant package to two sub-agencies namely M/s ESENTEE and M/s UK MECON and the works commenced only in the first week of June 2014.
- ix. With all essential systems being ready and with only conveyor works pending at the time of initial synchronization, the petitioner was of the view that, it shall achieve COD of unit III well before the stipulated time of six months from initial synchronization. Further, with respect to the CHP works, the petitioner has put all out efforts from all possible directions to ensure that M/s BHEL and its sub-agencies complete the works for timely commercialization of Unit III.
- x. The petitioner had submitted in Petition No. MP/129/2014 that it had taken up the issue of delay in erection and commissioning in various forums and had also written several letters to M/s BHEL-ISG. The petitioner made all efforts from all possible directions to pressurize M/s BHEL- ISG to complete the works on time to ensure Unit III readiness for COD.
- xi. The petitioner approached the Commission seeking permission to inject infirm power beyond six months from the date of first synchronization (28.8. 2014). Keeping in view the delay and the Commission vide order dated 25th August, 2014 granted permission to Unit III to inject infirm power into the grid up to 15.10. 2014.
- xii. After completion of the In-plant CHP works, bunkering was carried out and the petitioner was preparing to go ahead with the trial operation of Unit III, but due to catastrophic failure of one of the CW Pump, trial operation could not be completed. Sea water with IDCT was envisaged for the generating station as circulating water for condenser cooling system. The generating station has been provided with 6 no's of CW pumps for three units (2 per unit). The pumps are of vertical wet pit and impeller pull out type pumps manufactured by M/s WPIL in collaboration with MHI (Japan). Since the pumps are of impeller pull out type pumps, stand by pumps are not envisaged in the scheme. The petitioner had been facing severe problems with the availability of pumps owing to high pump vibration and high motor thrust bearing temperature.
- xiii. The petitioner took up the problems associated with pumps with the manufacturer, reviewed and revised several engineering aspects of the pump to overcome the vibration problem. The pump had undergone several modifications such as



modification at site, modification at WPIL (manufacturer) works and redesign/design ratification by WPIL in association with MHI (Japan). The modifications carried out at site reduced the failure rates, however, the manufacturer proposed to change the design of impeller like introduction of additional shells in the suction bell, flow stream liner in the bowl guide, provision of leather gaskets between the taper seating surface of the bowl and bowl guide to address the vibration problem. All the above modifications have been made in one of the pump.

- xiv. The petitioner relied on the availability of pumps, since the various ratifications carried out has reduced the failure rates of pumps. On 2.9.2014, the petitioner had given a letter to M/s WPIL intimating the major failure of the said CW pump and asked M/s WPIL to perform inspection and root cause analysis.
- xv. On 10.9.2014, the petitioner wrote to M/s WPIL expressing serious concerns over sustained high vibration level and repeated failure of pumps and motors and also insisted on the requirement of all the 6 pumps in proper working condition for declaration of commercial operation of the Unit by September, 2014.
- xvi. NETRA (Research & Development wing of NTPC Ltd) also studied the vibration problems of CW pumps in Vallur and reviewed the possibilities to overcome the problem.
- xvii. In view of the above circumstances, the petitioner approached the Commission for injection of infirm power beyond 15.10.2014 and up to 31.12.2014 for demonstrating full load trial run and before declaration of the COD of the said unit. The Commission vide order dated 17.10.2014 allowed the petitioner to inject infirm power up to 31.12.2014. In line with the Tariff Regulations specified by the Commission, the petitioner completed 72 hours full load trial operation on 10.12.2014 before declaration of COD. During the preparatory activities for COD, high vibration was observed in the Turbine shaft. To accomplish sustained and reliable operation of the Unit, it was decided along with the Turbine manufacturer M/s BHEL to rectify the vibration problem before declaration of COD. After rectifying the turbine vibration problem, Unit III was declared under commercial operation w.e.f. 26.2.2015.

16. In the above circumstances, the petitioner has submitted that it took best efforts from all possible directions to declare COD within 28.8.2014 but due to continuous unforeseen problems and difficulties, the COD was delayed from the target date and could be done only on 26.2.2015. It has further submitted that the failure of CW pump and problem of turbine vibration were last minute surprises and completely unforeseen instances which had caused the delay of a further period of 6 months from the planned date of declaration of commercial operation. The petitioner has submitted that the Commission while granting extension of time for injection of infirm power had considered the bonafide reasons and circumstances on account of which the petitioner had sought extension of time for injection of infirm power. Accordingly, the petitioner has prayed that



the delay in declaration of COD due to reasons as stated above may be considered to be beyond the control of the petitioner.

### **Submission of Respondents**

#### **KSEB**

17. The respondent, KSEB vide affidavits dated 24.11.2014 and 9.1.2015 has submitted as under:

(a) The reasons furnished by the petitioner that there was delay in tendering process and consequential delay in award of packages due to inclusion of Unit-3 requirement also in balance of Plant packages and that the delay in award of site levelling package and main plant civil package for Stage-1 and retendering issues connected with Cooling Water equipment and Coal Handling Plant may not be allowed as these reasons are purely attributable to the petitioner and hence the delay due to awarding contracts may not be admitted and the IDC due to this delay may be disallowed from the capital cost.

(b) The submission of the petitioner that the work has been affected adversely due to unprecedented rains in 2010 and 2011 is not justifiable and may not be admitted. These delays are attributable to the petitioner as the petitioner ought to have carried out necessary follow ups for speedy execution of the work. Moreover, the petitioner before preparation of the original scope of work ought to have done necessary earth work study, pre-commissioning survey including soil investigation at the planning stage itself before preparation of scope of work.

(b)The delay due to non availability of start-up power may be admitted only after the petitioner submits the supporting documents as regards the submission that the boiler light up of unit 1 was delayed by 13 months due to delay in getting start up power as PGCIL could not make available start up power due to RoW issues and court cases.

(e) Since the petitioner is joint venture of NTPC and TANGEDCO, proper care and attention could have been taken by the petitioner to prevent theft of fabricated material. Further, the petitioner ought to have taken timely initiatives to stop the local disturbances with the help of local administration. Hence the reasoning provided by the petitioner does not substantiate the delay and may be disallowed.

#### **TANGEDCO**

18. The respondent, TANGEDCO vide affidavit 22.9.2015 has submitted that the reasons furnished by the petitioner for delay in COD clearly exhibits the inefficiency on part of the



petitioner to execute the project. It is also submitted that improper planning and coordination led to the delay in commissioning of the project. The respondent has further submitted that the beneficiaries should not be burdened with the escalated project cost as scheduled and hence the Commission may negate the claim of the petitioner as the delay does not fall within the parameters for uncontrollable factors. In response, the petitioner in its rejoinder has submitted that the project activities/ items are inter-related and completion of one activity has a consequential effect on the commencement of the following activity. It is also stated that any delay in an activity/ item shall cause delay in commencement of other activities. Accordingly, it has submitted that the time overrun in the COD of the project may be condoned.

### **Analysis and decision**

19. We have examined the submissions of the parties and the documents available on record. The Appellate Tribunal for Electricity (the Tribunal) in its judgment dated 27.4.2011 in Appeal No.72 of 2010 has laid down the following principle for prudence check of time overrun and cost overrun of a project as under:

*“7.4. the delay in execution of a generating project could occur due to following reasons:*

*Due to factors entirely attributable to the generating company, e.g.,*

*i. Imprudence in selecting the contractors/suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors/suppliers as per the terms of contract, mismanagement of finances, slackness in project management like improper co-ordination between the various contractors, etc.*

*ii. Due to factors beyond the control of the generating company e.g.*

*Delay caused due to force majeure like natural calamity or any other reasons which clearly establish, beyond any doubt, that there has been no imprudence on the part of the generating company in executing the project.*

*iii. Situation not covered by (i) & (ii) above.*

*In our opinion in the first case the entire cost due to time over run has to be borne by the generating company. However, the Liquidated damages (LDs) and insurance proceeds on account of delay, if any, received by the generating company could be retained by the generating company. In the second case the generating company could be given benefit of the additional cost incurred due to time over-run. However, the consumers should get full benefit of the LDs recovered from the contractors/supplied of the generating company and the insurance proceeds, if any, to reduce the capital cost. In the third case the additional cost due to time overrun including the LDs and insurance proceeds could be shared between the generating company and the consumer. It would also be prudent to consider the delay with respect to some benchmarks rather than depending on the provisions of the contract between the generating company and its contractors/suppliers. If the time schedule is taken as per the terms of the contract, this may result in imprudent time schedule not in accordance with good industry practices.*



20. The factors responsible for the delay in the commissioning of the unit III of the generation station as summarized by the petitioner are as under:

	<b>Period</b>
On account of cyclone JAL	8 months (November, 2010 to June, 2011 )
On account of cyclone THANE	8 months (December, 2011 to August, 2012)
On account of delay by Civil Contractor M/s. Gammon	1month (September, 2012)
On account of NGT ban on Earth Quarrying	8 months (July, 2014 to February, 2015)

21. As stated, the schedule COD of Unit-III is 27.1.2013 against which the actual COD of the said unit is 26.2.2015. Thus there is a time overrun of 25 months. From the above submissions of the petitioner, the delay of 25 months in the COD of Unit-III can be categorized and examined as under:

- a) *Delay of 13 months during the construction of the project till the first synchronization of Unit-III; and*
- b) *Delay of 12 months for Unit-III from the synchronization to actual COD*

**Delay on account of cyclones (JAL and THANE) and unprecedented rainfall during 2010 and 2011 (16 months)**

22. The petitioner vide affidavit dated 3.5.2016 has submitted that the unprecedented rains during the years 2010 and 2011 had hampered the progress of work of TG deck and TG foundation work for 8 months from November, 2010 to June, 2011 and for a further period of 8 months from December, 2011 to August, 2012. In justification of the same, the petitioner has submitted that the material supply was affected due to damage to the approach road and manpower was completely demobilized. Accordingly, the petitioner has submitted that there was a delay of about 13 months in commencement of condenser erection works and 16 months in commencement of TG erection works as both the activities were completely dependent on the casting of TG deck and TG civil foundation works. It has further submitted that the heavy rainfall was followed by cyclone which damaged the labour colony and due to panic labourers left for their hometown. The respondent, KSEB has stated that the submissions of the petitioner that work has been affected adversely due to unprecedented rains in 2010 and 2011 is not justifiable and may not be admitted.





23. It is observed from the bar chart furnished by the petitioner vide affidavit dated 3.5.2016 that the schedule of boiler foundation work was from 28.7.2009 to 27.5.2010. The start date of the boiler foundation work was as per the original schedule date i.e. 28.7.2009 but its completion was delayed by one month with respect to the date of completion. The petitioner has furnished the reasons for the delay of one month for the work of the boiler foundation due to poor performance of the contractor. The petitioner can settle this delay as per the contractual provisions. Accordingly, we are not inclined to condone this delay of one month in completion of boiler foundation work. The original schedule of the boiler erection work up to drum lifting was five months from 28.5.2010 to 28.10.2010. However, due to consequential delay of one month in boiler foundation work, the boiler erection work was commenced on 1.7.2010 and was actually completed on 29.7.2011. Accordingly, the total time of 13 months taken for completion of boiler erection work up to drum lifting instead of 5 months as per original schedule thereby resulting in a delay of 8 months. This delay of 8 months was on account of cyclonic storm JAL in November, 2010 followed by heavy rain in December, 2010 when the boiler foundation work was in progress. It is observed from the rainfall data furnished by the petitioner that the average rainfall during the month of November and December for the previous three years i.e. 2007, 2008 & 2009 is 442.7 mm and 143.73 mm respectively, and whereas the actual rainfall was 230 mm during November, 2010 and 418 mm during December, 2010. From the bar chart furnished by the petitioner, it is noticed that there is consequential delay in boiler drum lifting, condenser erection and boiler hydro test. Thus, it could be inferred from the above that Cyclone JAL in November, 2010 followed by unprecedented rains with monthly maximum rainfall of 418 mm during the month of December, 2010 the boiler erection work, fabrication yard and civil works of TG foundation were hugely affected. Also the process of de-watering the water logged area and to carry out further civil work took considerable amount of time. In addition to this, there was disruption of labours and their colonies were damaged and accordingly rebuilding and labour colonies and remobilization to the site took considerable amount of time. Considering the fact that the delay in the above said works was on account of natural calamities, we are inclined to condone the delay due to cyclone JAL and rainfall as the same was beyond the control of the petitioner.





Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation (ii))], the total delay of 8 months is condoned.

24. The petitioner has also submitted that there has been a delay of 8 months in the completion of the work on account of cyclone THANE during December, 2011. It is noticed from the bar chart furnished by the petitioner that the original schedule of TG erection work was for 12 months from 28.5.2011 to 27.5.2012. It is observed that the work could not be started as per original schedule of 28.5.2011 due to consequential delay because of cyclone JAL in November, 2010. Besides this, severe cyclone THANE, in December, 2011 had added to the delay in the work of TG erection which was finally started on 15.9.2012 and was subsequently completed on 24.9.2013. It is observed from the rainfall data furnished by the petitioner that the average rainfall during the month of November and December for the previous four years (i.e. 2007, 2008, 2009 & 2010) is 389 mm and 212.3 mm respectively while the rainfall remained 637 mm and 117.8 mm for the months of November, 2011 and December, 2011 respectively. In view of these facts, we find that there was heavy rain during November, 2011 prior to the month of cyclone while the rainfall during December, 2011 is lower than the monthly rainfall data of previous four years. This disruption caused by wind and rain hampered the commencement of TG erection work. Though the rainfall data alone cannot be the basis to evaluate the amount of devastation caused by cyclone, we noticed that the similar problems faced by the petitioner like water logging, disruption of labourers, etc during the Cyclone JAL in November, 2010 was also faced by the petitioner due to cyclone THANE in December 2011. Thus, as per the submission of the petitioner, there has been a total delay of 16 months up to the start of TG erection work, (i.e. 8 months each due to Cyclone JAL in November, 2010 and THANE in December, 2011). Considering the fact that the generating station was severely affected by cyclone and rain, the delay, in our view, is attributable to natural calamities and is beyond the control of the petitioner.

25. From the perusal of the documents on record, discussion above and summary of delay, out of the total delay of 25 months as submitted by the petitioner, it is observed that there is delay of 12 months from the date of first synchronization (28.2.2014) to actual COD (26.2.2015). Therefore the total delay from date of erection/ construction to synchronization is 13 months (25-



12). Considering the delay of 1 month in boiler foundation work which is not condoned and 1 month delay by the civil contractor M/s Gammon, which has been discussed in the subsequent paragraphs, there is a total delay of 11 months (8 months due to cyclone JAL and 3 months due to cyclone THANE), from the above discussion it is inferred that delay due to cyclone THANE is only 3 months. The schedule for start of TG erection work was from 28.5.2011 and the consequential effect of cyclone JAL during November, 2010 was upto June, 2011 and hence the TG erection work should have been started by July, 2011. Accordingly, there is gap of 5 months from the effect of cyclone JAL (June, 2011) to occurrence of cyclone THANE in December, 2011. It is noticed that the petitioner has not furnished any justification regarding this gap of 5 months and has also not made out a case that there was actual delay of 8 months due to cyclone THANE in December, 2011. The petitioner has also not quantified the post cyclone activities which were undertaken by the petitioner for normalization of the effect of cyclone. In this background, we are of the considered view that there was consequential delay of 3 months due to cyclone THANE in December, 2011 which was beyond the control of the petitioner. Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation (ii))], the total delay of 3 months due to cyclone THANE is condoned.

26. Based on the above discussions, the total delay of 11 months has been condoned on account of cyclone JAL in November, 2010 (8 months) and cyclone THANE in December, 2011 (3 months). Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation (ii))], the total delay of 11 months is condoned and the generating company is given the benefit of the additional cost incurred due to time overrun. However, the LD recovered from the contractor and the insurance proceeds, if any, would be considered for reduction in the capital cost.

#### **Delay due to civil contractor (1 month)**

27. The petitioner has submitted that the delay of 1 month during September, 2012 is attributable to the working of the civil contractor M/s Gammon. It has submitted that despite persistent efforts, the contractor failed to mobilize its resources and had failed to give the desired results after the impact of the cyclones. However, from the submissions of the petitioner it is not clear as to which



work was delayed by one month due to failure of the contractor M/s Gammon to mobilize its resources and whether the said delay of one month was subsumed in the delay due to other reasons. In our view, it is the responsibility of the petitioner to maintain proper coordination, follow ups and check up in the award of and execution of contract and ensure that the work is completed within the scheduled date. It appears to us that there has been failure on the part of the petitioner in project management due to lack of coordination and accordingly, the work has been delayed. Moreover, as per contract procedure, there is declared completion date with terms and conditions and any violation of the terms and conditions of the contract would entail the contractor with imposition of penalty or recovery of LD. Hence, the delay in completion of work by the contractor cannot be said to be beyond the control of the petitioner and the responsibility squarely lies with the petitioner. Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation (i))], the delay of one month cannot be said to be beyond the control of petitioner and hence not condoned. Therefore, the increase in cost on account of the said delay has to be borne by the petitioner. However, the Liquidated Damages (LD) and Insurance proceeds if any, received by the generating company, on account of the said delay, could be retained by the generating company.

**On account of NGT ban on Earth Quarrying (8 months)**

28. The petitioner vide affidavit dated 3.5.2016 has submitted that the delay of 8 months was due to ban on earth quarrying by National Green Tribunal (NGT) vide order dated 28.3.2014 which resulted in the non-issuance of Environment Clearance (EC), which is a pre-requisite for digging/quarrying. It has also submitted that the stoppage of Ash dyke works consequently delayed the declaration of COD of Unit-III. It has further submitted that NGT finally lifted the restriction of the issuance of EC by SEIAA vide order dated 13.1.2015 and thereafter, EC was issued on 11.2.2015 for mining / excavation of earth to be used for ash dyke works at the project. Accordingly, the petitioner has submitted that the stoppage of earth quarrying has caused delay of 8 months and same is beyond the control of the petitioner.

29. It is observed that the petitioner vide affidavit 10.7.2015 had submitted that its third unit was first synchronised on 28.2.2014 with a scheduled COD as 28.8.2014 and the actual COD is



26.2.2015. Thus, there is a gap of 12 months from the date of first synchronisation to the actual COD. The petitioner has stated that the delay of 12 months from the date of synchronisation to actual COD is due to the non-completion of CHP work which was hampered by local disturbances, contractual problems, re-tendering and award of CHP work to different agencies. From the submissions of the petitioner, it is noticed that that CHP work was awarded on 29.3.2010 with a scheduled completion date of November, 2012. The progress of the work was unsatisfactory which was cascaded by problems of local disturbances in which one worker of Sub-agency of M/s BHEL was murdered and on account of that total work on Internal CHP inside Vallur TPP got stopped for one month and contractual problem of M/s BHEL with its sub-contractor. A discussion regarding the delay of CHP work was held at Chennai by the petitioner on 26.12.2013 and accordingly the first communication was sent to BHEL by the petitioner only 10.1.2014 followed by further correspondences on 25.2.2014 and 10.3.2014. The petitioner has not indicated the steps taken by it during the period between November, 2012 (completion date of CHP work) to December, 2013 (meeting regarding delay of CHP work) and has also not furnished any documentary evidence showing the efforts taken by it or with the contractor for settlement of the outstanding issues during the period from November, 2012 to December, 2013. It is however noticed that M/s BHEL being dissatisfied with the progress of work of sub-contractor M/s Tecpro, had terminated the work of CHP on 26.3.2014 and the same was re-tendered and awarded only during the first week of June, 2014 to two sub-contractors, namely, M/s Esentee and M/s UK Mecon. Moreover, the petitioner has not furnished the actual completion date of CHP work by the said contractors in the petition.

30. However, in Petition No. 129/MP/2014 filed by the petitioner for extension of time for injection of infirm power, the petitioner had furnished the target completion date as 7.6.2014. It had also submitted in the said petition that the scheduled date of COD of 15.10.2014 could not be achieved due to high vibration and high motor thrust bearing temperature in CW pump has lead to unexpected heavy leakage in pipe lines of HVAC (AC & Ventilation) resulting in tripping of air-conditioning system of unit control room. It has further submitted that the problems associated with CW pump was taken up with the manufacturer and subsequently in Petition No. 392/MP/2014 filed by the petitioner before the Commission seeking injection of infirm power for testing including full



load testing of Unit-III of the generating station beyond six months of initial synchronization, it had indicated the target completion date as 20.11.2014 for repair of pumps. Also, the petitioner has stated that after completion of CW pump works, the 72 hour trial run operation was completed on 10.12.2014, but high vibration was observed in the turbine shaft and after rectifying the turbine shaft vibration problem, the COD of Unit-III was finally declared on 26.2.2015.

31. It is evident from the above submissions that the delay of 12 months from first synchronisation (28.2.2014) to the actual COD of Unit-III (26.2.2015) was due to the non-completion of CHP work, failure of CW pump and excessive turbine shaft vibration. In our considered view, the period of delay from July, 2014 to February, 2015 which was due to order of NGT banning earth quarrying had actually coincided with the delay due to non completion of CHP work, failure of CW pump and excessive turbine shaft vibration etc. In fact, the petitioner was not in a position to declare COD of Unit-III, even if there would have been no ban order of NGT on earth quarrying. In our view, the delay in CHP work except one month which was due to local disturbance and murder of worker and the delay due to technical problems/failure in CW pumps and turbine shaft vibration were due to non-performance of the sub-contractor of M/s BHEL /delay on the part of the contractor and cannot be said to be beyond the control of the petitioner. The petitioner is also entitled to recover the LD from the contractor for violation of the terms of the contract/non-performance of the contract and the liabilities on this count cannot be imposed on the beneficiaries. As stated, the petitioner has taken 12 months for declaration of COD of Unit-III from the date of synchronisation. Since there has been time overrun of 13 months prior to the synchronisation, the petitioner should have taken necessary steps for declaration of COD of the said unit, within 3 to 6 months after synchronisation. However, due to technical problem in machines and also due to delay in completion of CHP work, the petitioner was able to declare the COD only after 12 months from synchronisation. Considering the fact that it would normally take about 3 to 6 months for declaration of COD after synchronisation and keeping in view that some technical problems was faced by the petitioner to complete the pending works after synchronisation, we are inclined to grant a reasonable period of time from synchronisation of the unit to declaration of COD. Hence, out of the total delay of 12 months from the date of



synchronisation to declaration of COD, we are inclined to condone the delay of one month in CHP due to local disturbance and 6 months normally taken from synchronisation to COD to stabilize the unit on the ground that the said delay was beyond the control of the petitioner. Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation (ii))], the total delay of 7 months is condoned and the generating company is given the benefit of the additional cost incurred due to time overrun for this period. However, the LD recovered from the contractor and the insurance proceeds, if any, would be considered for reduction in the capital cost. For the balance period of five months delay which has not been condoned, the increase in cost has to be borne by the petitioner. However, the Liquidated Damages (LD) and Insurance proceeds if any, received by the generating company, on account of the said delay, could be retained by the generating company.

32. To summarise, the delay of 11 months (out of 13 months) from the date of erection to the synchronisation of Unit-III, has been condoned due to natural calamities i.e. cyclone JAL in November, 2010 and THANE in December, 2011 as the same is beyond the control of the petitioner. However, out of the total delay 12 months from the date of synchronisation to the actual COD of Unit-III due to non completion of CHP work, failure of CW pump and excessive vibration in turbine shaft, a period of 7 months has been condoned for reasons beyond the control of the petitioner and the balance period of delay of five months is attributable to the petitioner, as narrated above.

#### **Impact of time overrun on contract price, IDC and IEDC etc.**

33. The petitioner vide ROP of the hearing dated 16.2.2016 was directed to furnish the details of the impact of time overrun on cost of Plant & Machinery under different packages separately. In response, the petitioner vide affidavit dated 03.05.2016 has submitted that price variation is calculated on the basis of date of scheduled COD and not on actual COD unless L2 schedule is revised. The petitioner has further submitted that L2 schedule has not been revised for any other packages except for two packages and there has not been any increase in prices of contract packages due to time overrun from the scheduled COD to the actual COD of Unit-III except for the following two packages:



(₹ in Crore)				
Sl. No.		Price variation clause (PVC) as per original L2	PVC as per revised L2	Difference
1	Station piping, FO unloading & storage package.	2.41	4.00	1.59
2	Air conditioning package	0.22	0.45	0.23
<b>Total</b>		<b>2.63</b>	<b>4.45</b>	<b>1.82</b>

34. The petitioner vide affidavit dated 30.08.2016 has submitted that on the basis of books of account no price escalation has been paid or included in the capitalization value beyond the scheduled date prescribed in the contract agreement for the work of main plant & offsite civil works Phase-II, CW system & makeup water and these amount is inclusive of cost of free issue material provided by the company. The package wise details of total capital expenditure incurred as on COD of Unit-III certified by the auditor is as under:

(₹ in crore)				
	Contract value as per LOA (excluding taxes & duties)	Payment to the contractor including escalation up to scheduled dates only	Material issued by the petitioner	Total Capital cost
C.W. system & makeup water system civil	57.00	55.54	51.54	107.08
Main plant & offsite civil works of Phase-II	160.12	120.25	135.06	255.31

35. The submission of the petitioner that there is no cost overrun in the contractual price due to time overrun has been verified from the revised project cost furnished in Form-5B of the affidavits dated 3.5.2016 and 30.8.2016. It is noticed that there is no increase in Land, Civil work, EPC and non-EPC cost but there is increase in the cost of two packages as submitted by the petitioner above. Accordingly, the pro rata reduction on account of cost overrun due to time overrun of the two packages for the said period as on COD of Unit-III is worked out as under:

(₹ in lakh)			
Total exceeded Capital expenditure till the completion or COD whichever is earlier	Total period taken from zero date to actual COD (Months)	Time overrun disallowed (Months)	Pro-rata due to Time overrun disallowed for Unit-III
	Unit-III	Unit-III	
(1)	(2)	(3)	(4)=((1)x(3))/(2)
182.00	25	7	50.96

36. The petitioner vide ROP of the hearing dated 16.2.2016 was also directed to furnish details of impact of time overrun on increase in IDC & IEDC from the scheduled COD to the actual COD of Unit-III. In response, the petitioner vide affidavit dated 3.5.2016 has submitted the break-up of the increase in IDC & IEDC from the scheduled COD to the actual COD as under:



Cost Element	(₹ in crore)		
	As per approved Revised Cost Estimate	As per actual as on COD of Unit-III (26.02.2015)	Increase in IDC & IEDC for the station
	(1)	(2)	(2-1)
IDC	1427.89	1564.73	136.84
IEDC	425.94	408.46	(-)17.48

37. The petitioner has furnished the increase in IDC & IEDC of the generating station as on COD of Unit-III as compared to IDC & IEDC as per RCE. However, the petitioner had not submitted the increase in IDC & IEDC for Unit-III from scheduled COD to the actual COD. It is observed from Form-5B that IDC of Unit-III as on COD is ₹57815.48 lakh and Overhead expenses in the form of establishment charges is ₹15039.40 lakh. Due to time overrun in COD of Unit-III, there is requirement of reduction in IDC & IEDC due to the disallowance of time overrun of 7 months. Thus, the pro rata deduction in Overhead expenses due to the delay of 7 months in the COD of Unit-III is worked out as under:

(₹ in lakh)				
	Total period taken from zero date to actual COD (in months)	Time overrun disallowed (in months)	Overhead Expenses under IEDC	Pro-rata reduction = (4x 3)/2
(1)	(2)	(3)	(4)	(5)
As on COD of Unit-III (26.2.2015)	69.25	7	15039.40	1737.40

### Capital Cost

38. Clause (1) of Regulation 9 of the 2014 Tariff Regulations provides that the capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects. Clause 3 of Regulation 9 of the 2014 Tariff Regulations provides as under:

*“9(3)-The Capital cost of an existing project shall include the following:*

*(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;*

*(b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and*

*(c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”*

39. The capital cost claimed by the petitioner as on 1.4.2014 and 26.2.2015 for tariff purpose as submitted in Form-I(i)(part-I) vide affidavit dated 10.7.2015 are as follows:





	(₹ in lakh)	
	1.4.2014 to 25.2.2015	26.2.2015 (COD of Unit-III) /Station to 31.3.2015
Opening Capital Cost on Cash basis	577317.00	852103.56
Notional IDC capitalised as on 31.3.2014	6445.34	1241.76
Additional capitalization	71.03	1551.20
Liabilities Discharged	8103.17	7288.91
<b>Closing Capital cost</b>	<b>591936.57</b>	<b>862185.43</b>

### Approved Cost

40. The Investment Approval of Phase-I of the project (Units- I & II) was accorded by the Board of the Petitioner Company on 14.7.2007 at a cost of ₹5552.78 crore including IDC and FC of ₹ 497.01 crore and Working Capital Margin (WCM) of Rs 129.225 crore at a price level of second quarter of 2007. Subsequently the investment approval of Phase-II (Unit-III) was accorded by the Board of the Petitioner Company on 19.5.2009 at a cost of Rs 3086.779 crore including IDC and FC of Rs 334.65 crore and WCM of Rs 66.74 crore in the first quarter of 2009. Accordingly, the total project cost as approved by the Board for three units (Phase- I & II) is Rs 8639. 557 crore. The total cost of the project (Phase-I & II) excluding WCM works put to Rs 8443.592 crore. The petitioner vide affidavit dated 3.5.2016 has furnished the Revised Cost Estimate (RCE) of Rs 10080.50 crore which includes the project cost of ₹9799.84 crore and WCM of ₹280.57 crore.

### Admitted Capital Cost

41. The Commission in its order dated 8.2.2016 in Petition No. 198/GT/2013 had approved the capital cost of ₹553348.08 lakh as on 31.3.2014 including IDC of ₹73139.32 lakh, Normative IDC of ₹1533.54 lakh and additional capital expenditure of ₹2921.00 lakh. Thereafter, the Commission vide order dated 18.4.2017 in Petition no. 28/RP/2016 had revised the capital cost as ₹ 558876.17 lakh including IDC of ₹73139.32 lakh, FC of ₹329.88 lakh, and notional IDC of ₹1533.54 lakh as on 31.3.2014. This has been considered as the opening capital cost as on 1.4.2014.

### Interest during Construction

42. As stated, there is a time over-run of 25 months in the declaration of commercial operation of Unit-III of the generating station. The time overrun involved in the COD of Unit-III has been examined and out of the total time overrun of 25 months, a delay of 17 months has been condoned



by this order on the ground that the same was not attributable to the petitioner. Based on the condonation of delay of 17 months in case of Unit-III as above, the date of scheduled COD is reset for computation IDC, IEDC etc. due to time overrun as follows:

Schedule COD as per LOA	SCOD shifted to	Actual COD	Time overrun disallowed (months)
27.1.2013	25.7.2014	26.2.2015	7

43. The petitioner has claimed IDC of ₹156473.26 lakh as on 26.2.2015 and the break-up of the same as per Form- 5B is as under:

(₹ in lakh)	
Opening IDC as on 1.4.2014	98177.19
Add: IDC in add-cap during 1.4.2014 to 25.2.2015	480.59
IDC as on 25.2.2014 pertaining to 2 units	98657.78
Add: IDC capitalised as on 26.2.2015 pertaining to Unit-III	57815.48
<b>Total IDC claimed as on 26.2.2015 (COD of Unit-III)</b>	<b>156473.26</b>

44. It is observed that the petitioner has availed loan for the project from M/s Rural Electrification Corporation Limited. As per the balance sheet as on 26.2.2015, the total loan outstanding as on 26.2.2015 is ₹589798.49 lakh (₹371464.92 lakh for Phase-I and ₹218333.57 lakh for Phase-II). IDC which is to be allowed for capitalisation has been calculated based on the details furnished by the petitioner such as loan agreements, drawl/ interest rate resets/ repayment etc and the same has been restricted up to the rescheduled COD (25.7.2014). The petitioner has not furnished the basis of allocation of IDC. Hence, details such as total interest charged to Profit and loss Account out of the total interest on the loan, amount of IDC transferred to fixed assets and IDC lying in CWIP as on COD of Unit-III have all been obtained from the financial statements for the generating station since inception of fund infusion till COD of the generating station. The total IDC computed till rescheduled COD of the generating station has been apportioned as under based on the proportion worked out with the above-mentioned details:

(₹ in lakh)	
	<b>IDC Allowed</b>
IDC allowed as on COD of Unit-I and Unit-II vide order dated 8.2.2016 in Petition No. 198/GT/2013	73139.32 (38660.53 for Unit-I and 34478.79 for Unit-II)
IDC allowed as on COD of Unit-III	51969.73
<b>Total IDC allowed for capitalization till Scheduled COD</b>	<b>125109.05</b>



The IDC allowed as above is subject to revision, based on the allocation details to be furnished by the petitioner at the time of truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

### **Normative IDC**

45. The petitioner has claimed normative IDC of ₹1241.76 lakh from 1.4.2014 to 25.2.2015, based on the deployment of equity in excess of 30% of the total expenditure based on the computation vide Form-14A. Accordingly, the normative IDC has been computed and allowed based on the details namely actual deployment of debt and equity on quarterly basis, cash expenditure incurred and rate of interest on actual loan portfolio furnished by the petitioner. The Normative IDC (restricted upto 25.7.2014) allowed for the purpose of tariff is under:

<i>(₹ in lakh)</i>	
Normative IDC already allowed up to 31.3.2014	2412.88
Normative IDC from 1.4.2012 to 25.7.2014	435.75
Normative IDC allowed till 25.7.2014	<b>2848.63</b>

### **Incidental Expenditure during Construction**

46. The petitioner has claimed Incidental Expenditure during Construction (IEDC) of ₹30430.76 lakh in Form-13D. The petitioner was directed vide ROP of the hearing dated 16.2.2016 to furnish the reconciliation of IEDC claimed vide Form 13D as against Form 5B and in response, the petitioner vide affidavit dated 3.5.2016 has submitted that the amount of IEDC capitalised as on COD of Unit-III is ₹275.426 crore (on cash basis) and does not include IEDC pertaining to CWIP. The IEDC as per Form 13 D includes IEDC pertaining to CWIP amounting to ₹28.8808 crore. As stated above, the pro- rata reduction in overhead expenses due to the delay of 8 months in COD of Unit-III as worked out in the table above is ₹1520.23 lakh. This amount has been considered for the purpose of capital cost and the same is subject to revision based on the details of increase in IDC and IEDC for Unit-III from scheduled COD to the actual COD along with the break-up of expenditure to be furnished by the petitioner at the time of truing- up of tariff of the generating station.

### **Initial Spares**

47. Regulation 13 of Tariff Regulations 2014 provides for initial spares as under:



*“13. Initial Spares: Initial spares shall be capitalised as a percentage of the Plant and Machinery cost upto cut-off date, subject to following ceiling norms:*

*(a) Coal-based/lignite-fired thermal generating stations - 4.0%*

*Provided that:*

*i. where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Commission, such norms shall apply to the exclusion of the norms specified above:*

*iv. for the purpose of computing the cost of initial spares, plant and machinery cost shall be considered as project cost as on cut-off date excluding IDC, IEDC, Land Cost and cost of civil works. The transmission licensee shall submit the breakup of head wise IDC & IEDC in its tariff application.”*

48. The Commission vide order dated 8.2.2016 in Petition No.198/GT/2013 had allowed the capitalization of initial spares amounting to ₹1190.00 lakh as on actual date of COD of Unit-I and ₹982.00 lakh as on actual date of COD of Unit-II. Accordingly, the total initial spares capitalized as on COD of Units-I&II (combined) is ₹2172.00 lakh. The COD of the Unit-III of the generating station is 26.2.2015 and accordingly, the cutoff date of the generating station is 31.3.2018. The petitioner vide affidavit dated 10.7.2015 has claimed Initial spares of ₹8700 lakh during 2015-18 (₹1600 lakh in 2015-16, ₹3500 lakh in 2016-17 and ₹3600 lakh in 2017-18) on projection basis. Thus, the total initial spares up to cut-off date of the generating station works out to ₹10872 lakh (2172+8700). The petitioner vide Form 5B of the affidavit dated 10.7.2015 has furnished the anticipated Plant and Machinery cost of ₹500369.49 lakh up to 31.3.2018. Therefore, the projected initial spares of ₹10872 lakh claimed by the petitioner up to cut off date of the generating station works out to 2.17% of the Plant & Machinery cost which is within the ceiling limit specified under the above regulations and hence allowed. The petitioner is however directed to furnish the break-up of actual plant & machinery cost and the details of initial spares capitalized up to the cut-off date at the time of truing-up.

### **Infirm Power**

49. The petitioner vide affidavit dated 10.7.2015 has submitted that the revenue earned from sale of infirm power as on COD of Unit-III is ₹1740.85596 lakh as on COD of Unit-III. It has also submitted that the infirm power has been capitalized with the respective units of the generating station. In view of this submission, no adjustment in the capital cost has been made towards revenue earned from sale of Infirm Power from Unit-III of the project till the COD of Unit-III.



## Liquidated Damages

50. The petitioner has not furnished any details regarding the amount of Liquidated Damages (LD) recovered. Accordingly, the petitioner is directed to submit the complete details of the amount of LD recovered for delay under the contract of different packages at the time of trying up.

## Additional Capital Expenditure

51. The petitioner has claimed additional capital expenditure of ₹71.03 lakh during the period from 1.4.2014 to 25.2.2015 and ₹1551.20 lakh from 26.2.2015 to 31.3.2015. It is also submitted that liabilities amounting to ₹8103.17 lakh during 1.4.2014 to 25.2.2015 and ₹7288.91 lakh during the period from 26.2.2015 to 31.3.2015 have been discharged. These amounts have been allowed and considered in the capital cost of the generating station.

52. Regulation 14 of the 2014 Tariff Regulations provides for additional capitalization of an existing project as under:

*“14. Additional Capitalization and De-capitalization: (1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*

*(i) Un-discharged liabilities recognized to be payable at a future date;*

*(ii) Works deferred for execution;*

*(iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;*

*(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and*

*(v) Change in law or compliance of any existing law:*

*Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff. “*

53. The capital expenditure has claimed projected additional capital expenditure under Regulation 14(1) of the 2014 Tariff Regulations in respect of the generating station for the period 2015-19 as summarized under:

<i>(₹ in lakh)</i>					
Sl. No.	Head of work / Equipment	2015-16	2016-17	2017-18	2018-19
1	Preliminary investigation & Site development	0.00	1250	0.00	0.00
2	Steam Generator Island	1759.28	0.00	0.00	0.00
3	Turbine Generator Island	2433.99	0.00	0.00	0.00



4	DM water Plant	241.00	0.00	0.00	0.00
5	Chlorination plant	17.10	0.00	0.00	0.00
6	Ash Handling system	8299.01	0.00	2760.57	0.00
7	Coal Handling Plant	7809.00	0.00	0.00	0.00
8	Air Conditioning & Ventilation system	877.70	0.00	259.50	0.00
9	Fire fighting system	126.00	0.00	0.00	0.00
10	Workshop lab (inclpp)	25.00	725.00	250.00	0.00
11	Transformer package	1223.55	0.00	0.00	0.00
12	C & I Package( incl. instn. Cable)	1384.36	251.00	96.00	0.00
13	Initial spares	1600.00	3500.00	3600.00	0.00
14	Main plant / Adm. building	5701.00	7857.00	4876.00	0.00
15	CW System	90.00	0.00	0.00	0.00
16	Ash disposal area development	1550.55	12400.0	6500.00	0.00
17	Township & colony	4182.00	9577.0	5667.00	0.00
18	Temporary Construction & enabling works	350.00	0.00	0.00	0.00
19	Chimney	416.00	0.00	0.00	0.00
20	Tools& Plant	502.33	600.00	550.00	0.00
	<b>Total</b>	<b>38587.53</b>	<b>36160.00</b>	<b>24559.00</b>	<b>0.00</b>

54. It is observed from the above that the petitioner has claimed total projected additional capital expenditure of ₹99306.53 lakh during 2015-18 (₹38587.53 lakh in 2015-16, ₹36160.00 lakh in 2016-17 and ₹24559.00 lakh in 2017-18). As stated, the cut-off date of the generating station is 31.3.2018. The claim of the petitioner within the cut-off date is towards deferred works on Land, Main Plant & Equipment package, Spares, Civil work, Construction & Pre-commissioning expenses. Since the claim of the petitioner is within the original scope of work and within the cut-off date of the generating station, the total projected additional capital ₹99306.53 lakh during 2015-18 is allowed under Regulation 14 (1) of the 2014 Tariff Regulations. The petitioner is however directed to submit the details of works asset wise/work wise included in the original scope of work along with estimate and actual expenditure, liabilities recognized to be payable at a future date and the works deferred for execution along with actual work of execution at the time of triung-up.

### **Funding Gap**

55. The actual cash expenditure claimed as per Form 14A is ₹881826.00 lakh. On the other hand, it is observed that the fund raised through loan, share capital and share application money is ₹854918.71lakh, which is evident from balance sheet of the generating station as on 26.2.2015. The details are as under:



(₹ in lakh)		
a	Net loan as per Balance Sheet	589798.49
b	Share capital as per Balance Sheet	253121.22
c	Share application money as per Balance Sheet	11999.00
1	Total fund raised as per balance sheet (Net loan + Share capital + Share application money) a+b+c	<b>854918.71</b>
2	Actual cash expenditure as per Form 14A	<b>881826.00</b>
	<b>Funding gap (2-1)</b>	<b>26907.29</b>

56. Thus, there is a funding gap of ₹26907.29 lakh between the fund raised and the actual capital expenditure claimed. Moreover, the actual cash expenditure based on the cash expenditure details pertaining to fixed assets and capital work in progress as per auditor's certificate is as follows:

(₹ in lakh)				
		<b>Gross basis</b>	<b>UDL</b>	<b>Cash flow</b>
a	Gross Block of Fixed Assets	892587.32	47164.71	845422.61
b	CWIP	49878.17	8358.03	41520.14
c	Construction stores & Equipments	8595.02	2989.91	5605.11
<b>1</b>	<b>Total Expenditure</b>	<b>951060.51</b>	<b>58512.65</b>	<b>892547.86</b>
2	Total fund raised as per balance sheet	-	-	<b>854918.71</b>
	<b>Funding gap (1-2)</b>	-	-	<b>37629.15</b>

57. It is noticed from the above that the cash outflow toward capital expenditure as per auditor's certificate (₹892547.86) is more than the fund raised as per balance sheet by ₹37629.15 lakh. As there exists an unexplained funding gap of ₹37629.15 lakh, it may not be a correct approach to allow capital cost for tariff based on the cash expenditure as claimed by the petitioner or as per auditor's certificate which exceeds the long term sources of finance as evident from the above table. Accordingly, the said funding gap of ₹37629.15 lakh has been considered as un-discharged liability and has been deducted from the capital cost allowed for the purpose of tariff. Similar view has been taken by the Commission in Petition no. 28/RP/2016 (review of the order in Petition no. 198/GT/2013) vide order dated 18.4.2017.

The same is subject to revision, based on the justification/ explanation to be furnished by the petitioner as regards the funding gap, at the time of truing-up of tariff.

### **Capital cost**

58. Based on the above discussions, the capital cost allowed for the purpose of tariff of the generating station is as under:





(₹ in lakh)

	2014-15 1.4.2014 to 25.2.2015	2014-15 26.2.2015 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
Opening capital cost	558876.17	**827217.36	790341.99	866442.63	907730.04	933540.21
Less: unexplained gap between project funding and actual expenditure as on Unit-III COD	-	37629.15	-	-	-	-
Less: IDC/FC/FERV claimed as on Unit-III COD	-	58051.10	-	-	-	-
Less: Notional IDC included in capital cost claimed	-	1241.76	-	-	-	-
Add: IDC allowed on COD of Unit-III	-	51969.73	-	-	-	-
Add: FC allowed on COD of Unit-III	-	372.24	-	-	-	-
Add: FERV allowed on COD of Unit-III	-	235.62	-	-	-	-
Add: Notional IDC allowed	-	435.75	-	-	-	-
Less: pro-rata reduction in IEDC	-	1520.23	-	-	-	-
Less: Pro-rata reduction in two packages	-	50.96	-	-	-	-
<b>Total Opening cost</b>	<b>558876.17</b>	<b>781737.50</b>	<b>790577.61</b>	<b>866442.63</b>	<b>907730.04</b>	<b>933540.21</b>
Add: Additional capital expenditure	71.03	1551.20	38587.53	36160.00	24559.00	-
Add: Liabilities discharged	8103.17	7288.91	37277.49	5127.41	1251.17	-
<b>Closing capital cost</b>	<b>567050.37</b>	<b>790577.61</b>	<b>866442.63</b>	<b>907730.04</b>	<b>933540.21</b>	<b>933540.21</b>

(\*\* including 260166.99 capitalized for Unit-III on 26.2.2015)

### Reasonableness of Capital Cost

59. We now examine the reasonableness of capital cost as on the COD of the generating station as under:

(₹ in lakh)

A	Capital cost including soft cost as on 26.2.2015	<b>781737.50</b>
B	Less: IDC, FC, Notional IDC, FERV allowed towards Unit-III	52777.72
C	Less: IDC, FC, Notional IDC, FERV allowed till 31.3.2014	75002.74
D	Capital Cost excluding notional IDC, IDC, FC, FERV as on COD (26.2.2015) (A-B-C)	653957.04
E	Projected capitalization up to the cut-off date (31.3.2018) (excluding IDC & Liabilities)	99306.53
F	Capital cost excluding IDC, Notional IDC, FERV and FC including Projected capitalization up to the cut-off date.(Hard cost up to cut off date as on 31.3.2018) (A-B-C+F)	753263.57

60. The benchmark hard cost as specified by the Commission in Order dated 4.6.2012 for thermal power stations with coal as fuel at 2011, December price level with 3 units of 500MW each is ₹4.48 crore/MW. As stated, the hard cost of the generating station as on COD





(26.2.2015) is ₹653957.04 lakh (₹4.36 crore/MW) and as on the cut-off date of the generating station is ₹753263.57 lakh (₹5.02 crore/MW). The benchmark capital cost for thermal power generating stations as per Commission's order dated 4.6.2012 is dynamic and based on market trends, indices, subject to adjustment based on inflation. The hard cost linked to escalation in WPI for the intervening period has been taken into account to arrive at the capital cost as on COD. The indicative benchmark norms for capital cost based on December, 2011 index as base, needs to be escalated up to February, 2015 based on the WPI index for prudence check of the capital cost. As per data available with Ministry of Commerce and Industry, Government of India, the WPI index for February, 2015 is 175.60 as against the WPI index of 157.30 as on December, 2011 resulting in inflation of 1.042. Accordingly, the indicative benchmark hard cost is worked out as ₹4.66crore/MW (1.04 x 4.48). The hard cost as on COD of Unit-III/Station is ₹4.36 crore/MW which is lower than the indicative benchmark hard cost. However, the hard cost as on cut off date of the generating station including projected capitalisation is ₹5.02 crore/MW which is higher than indicative benchmark hard cost. The main reasons for higher capital cost of generating station are due to special features viz.(a) Cross country conveyor system for transportation of coal from port to site (b) Grab un-loader and (c) Desalination Plant. It is evident from the above that the hard cost of the generating Station (Units- I, II & III) up to the cut-off date is marginally higher than the benchmark cost mainly due to addition of special features. However, the actual hard cost up to cut off date can only be assessed after the end of the tariff period when capitalization is based on actuals.

## **Debt–Equity Ratio**

61. Regulation 19 of the 2014 Tariff Regulations provides as under:

*(1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*

*Provided that:*

- (i) where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
- (ii) the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
- (iii) any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt- equity ratio.*

*Explanation - The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up*



capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilized for meeting the capital expenditure of the generating station or the transmission system.

(2) The generating Company or the transmission licensee shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilisation made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.

(4) In case of generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.

62. The petitioner has considered debt equity ratio of 70: 30 for calculation of normative loan and equity. As stated above, it is noticed from Form-14A and the Auditor's Certificate that there is a funding gap of ₹37629.15 lakh between the funds raised through long term loans/equity and the cash expenditure as on 26.2.2015 which is as under:

(₹ in lakh)		
a	Net loan as per balance sheet	589798.49
b	Share capital as per balance sheet	253121.22
c	Share application money as per balance sheet	11999.00
1	Total fund raised as per balance sheet (Net loan + Share capital + Share application money) a+b+c	854918.71
2	Actual cash expenditure as per Form 14A	881826.00
3	Actual cash expenditure as per auditor's certificate	892547.86
	Funding gap (3-1)	37629.15

63. Accordingly, the cash expenditure considered for debt equity ratio calculation has been restricted to the funds raised, i.e. ₹854918.71. The balance sheet also indicates that an amount of ₹11999.00 as share application money is pending for allotment as on 25.2.2015 and therefore, the same has not been considered as equity without its conversion into share capital. In this background, while calculating the debt equity ratio, actual equity has been restricted to share capital and the balance amount (which includes the long term loans as per the balance sheet ₹589798.49 and share application money of ₹11999.00 lakh) is considered as loan. Accordingly,



debt-equity ratio as on COD of the generating station (26.2.2015) has been worked out and allowed as under:

(₹ in lakh)	
Actual cash Expenditure (restricted to fund raised)	854918.71
Equity (Share capital as per B.S.)	253121.22
Debt (Balancing figure)	601797.49
<b>Equity</b>	<b>29.61%</b>
<b>Debt</b>	<b>70.39%</b>

64. It is noticed from the balance sheet as on 31.3.2015 that the share application money amounting to ₹11999.00 lakh as existed on 25.2.2015 (station COD) has been converted into share capital. The balance sheet position as on 31.3.2015 with respect to debt and equity is as below:

(₹ in lakh)		
		Amount
a	Net loan	589281.57
b	Share capital	265121.22
c	Share application money as per balance sheet	-

65. It appears from the above that the share application money pending allotment as reflected in the balance sheet as on 25.2.2015 was converted into equity share capital subsequently. Conversion of the said sum into equity has since been achieved and there has been increase in position of equity capital albeit after the date of COD to tune of ₹11999.00 lakh, the denial of return on such sum as equity capital for the entire project life of 25 years, in our view, is not justified. In view of the above, we, in exercise of power to relax under Regulation 54 of the 2014 Tariff Regulations, allow the revision of debt-equity ratio post COD. Similar view has been taken by the Commission in Petition no. 129/GT/2015 vide order dated 30.3.2017. Since the petitioner has not furnished the exact date of such conversion, the same has been considered w.e.f 1.4.2015 considering the balance sheet presented as on 31.3.2015. Accordingly, the debt- equity ratio as on 1.4.2015 is as under:

Equity (share capital)	265121.22
Debt	589281.57
<b>Equity%</b>	<b>31.03%</b>
<b>Debt%</b>	<b>68.97%</b>

As the equity as on 1.4.2015 is more than 30%, as per Regulation 19 quoted as above, the debt- equity ratio for the purpose of calculation of tariff has been considered as 70:30.



66. The debt-equity ratio allowed as above is subject to revision based on the reconciliation of actual cash expenditure and project funding as on COD of the generating station and date wise details regarding conversion of the share application money into share capital to be furnished by the petitioner at the time of truing-up of the tariff of the generating station.

### **Return on Equity**

67. Regulation 24 of the 2014 Tariff Regulations provides as under:

*“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.*

*(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:*

*Provided that:*

*i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:*

*ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:*

*iii) additionalRoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:*

*iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:*

*v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:*

*vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.*

68. Regulation 25 of the 2014 Tariff Regulations provides as under:

*“Tax on Return on Equity (1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non-generation or non-transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”.*

*(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:*



*Rate of pre-tax return on equity = Base rate / (1-t)*  
*Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess."*

69. The petitioner has not claimed grossing up of RoE in the year 2014-15 and has grossed up for rest of the years (2015-16 to 2018-19) with the MAT rate of 20.9605% for the year 2013-14. It is noticed from the financial statement of the generating station for 2014-15 that there is no taxable income for the said year. As such, the claim of the petitioner is in order and the RoE for the said year has not been allowed to be grossed up. However, for the rest of the years (2015-16 to 2018-19) the petitioner has claimed grossing up of RoE. In terms of the 2014 Tariff Regulations, RoE is to be grossed up with the effective tax rate. In petitions wherein tariff has been determined in 2016-17 (for the period 2014-19) on projection basis, it has been the consistent approach of the Commission to allow the grossing up of MAT rate of 2014-15. However, in the instant case, the grossing up has not been allowed as there is no taxable income/tax payable in 2014-15. Accordingly, no grossing up of ROE is allowed for the tariff period 2014-19. The petitioner is however directed to furnish the basis of effective tax rates along with the Tax Audit Report for the period 2014-19 at the time of truing-up of tariff of the generating station in terms of Regulation 8 of the 2014 Tariff Regulations. Accordingly, return on equity is worked out and allowed as under:

	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 25.2.2015	26.2.2015 to 31.3.2015				
Gross Notional Equity	162512.91	231453.99	237173.28	259,932.79	272319.01	280062.06
Addition due to Additional Capitalisation	2376.94	2617.35	22759.51	12386.22	7743.05	-
Closing Equity	164889.84	234071.34	259932.79	272319.01	280062.06	280062.06
Average Equity	163701.38	232762.67	248553.04	266125.90	276190.54	280062.06
Return on Equity (Base Rate )	15.500%	15.500%	15.500%	15.500%	15.500%	15.500%
Tax rate for the year	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Rate of Return on Equity (Pre Tax )	15.500%	15.500%	15.500%	15.500%	15.500%	15.500%
<b>Return on Equity (Pre Tax)</b>	<b>23010.13</b>	<b>3360.71</b>	<b>38525.72</b>	<b>41249.51</b>	<b>42809.53</b>	<b>43409.62</b>

(₹ in lakh)



## Interest on Loan

70. Regulation 26 of the 2014 Tariff Regulations provides as under:

*"26. Interest on loan capital: (1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*

*(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*

*(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalization of such asset.*

*(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*

*(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*

*Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:*

*Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*

*(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*

*(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.*

*(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.*

*(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:*

*Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan."*

71. In terms of the above regulation, the normative loan outstanding as on 31.3.2014 has been considered as normative loan as on 1.4.2014. The petitioner vide Form 13 A has submitted the weighted average rate of interest based on actual loan portfolio and the same is found to be in order. Necessary calculations for interest on loan are as under:





(₹ in lakh)

	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 25.2.2015	26.2.2015 to 31.3.2015				
Gross Notional Loan	396363.26	550283.50	553404.33	606509.84	635411.03	653478.15
Cumulative Repayment of Loan upto previous year	28392.62	54113.78	57803.31	99673.72	144408.60	190794.80
Net Opening Loan	367970.64	496169.73	495601.02	506836.11	491002.43	462683.35
Addition due to Additional Capitalisation	5797.26	6222.76	53105.51	28901.19	18067.12	-
Repayment of Loan during the period	25721.16	3689.53	41870.42	44734.88	46386.20	47036.42
<b>Net Closing Loan</b>	<b>348046.74</b>	<b>498702.96</b>	<b>506836.11</b>	<b>491002.43</b>	<b>462683.35</b>	<b>415646.92</b>
Average Loan	358008.69	497436.34	501218.57	498919.27	476842.89	439165.13
Weighted Average Rate of Interest on Loan	11.45%	11.45%	11.40%	11.37%	11.37%	11.37%
<b>Interest on Loan</b>	<b>37183.20</b>	<b>5307.31</b>	<b>57134.24</b>	<b>56721.98</b>	<b>54225.15</b>	<b>49954.71</b>

## Depreciation

72. Regulation 27 of the 2014 Tariff Regulations provides as under:

*“27. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.*

*Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.*

*(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.*

*(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:*

*Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:*

*Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:*

*Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.*

*(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.*



(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system:

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services.”

73. The weighted average rate of depreciation furnished by the petitioner vide Form 11 is examined and found to be in order. Accordingly, depreciation has been calculated as under:

	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 25.2.2015	26.2.2015 to 31.3.2015				
Opening Gross Block	558876.17	781737.50	790577.61	866442.63	907730.04	933540.21
Additional Capitalization	71.03	1551.20	38587.53	36160.00	24559.00	-
Discharge of liabilities	8103.17	7288.91	37277.49	5127.41	1251.17	-
Closing Gross Block	567050.37	790577.61	866442.63	907730.04	933540.21	933540.21
Average Gross Block	562963.27	786157.55	828510.12	887086.33	920635.12	933540.21
Rate of Depreciation	5.0382%	5.0382%	5.0537%	5.0429%	5.0385%	5.0385%
Depreciable Value including amortization of lease land in 25 years	506666.94	707541.80	745659.11	798377.70	828571.61	840186.19
Remaining Depreciable Value	478274.33	653428.02	687855.80	698703.98	684163.01	649391.39
Depreciation (for the period)	<b>25721.16</b>	<b>3689.53</b>	<b>41870.42</b>	<b>44734.88</b>	<b>46386.20</b>	<b>47036.42</b>
<b>Cumulative Depreciation (at the end of the period)</b>	54113.78	57803.31	99673.72	144408.60	190794.80	237831.23





## O & M Expenses

74. Regulation 29(1) (a) of the 2014 Tariff Regulations provides the following O & M norms for coal based generating stations of 500 MW capacity:

(₹ in lakh/MW)				
2014-15	2015-16	2016-17	2017-18	2018-19
16.00	17.01	18.08	19.22	20.43

75. Proviso to Regulation 29(1) (a) of the 2014 Tariff Regulations provides as under:

*“Provided that the above norms shall be multiplied by the following factors for arriving at norms of O&M expenses for additional units in respective sizes for the units whose COD occurs on or after 1.4.2014 in the same station:*

500 MW and above	Additional 3 <sup>rd</sup> & 4th units	0.90
	Additional 5 <sup>th</sup> & above units	0.85

76. The petitioner has claimed O & M expenses in respect of the generating station as under:

2014-15		2015-16	2016-17	2017-18	2018-19
1.4.2014 to 25.2.2015	26.2.2015 to 31.3.2015				
14909.51	2202.18	25200.91	26714.33	28398.75	30186.60

77. The respondent, TANGEDCO has submitted that the claim of the petitioner is in excess against the norms specified for 500 MW units under Regulation 29(1) (a) of the 2014 Tariff Regulations and has prayed that excess claim may be negated.

78. We have examined the matter. The CODs of the Units-I and II of the generating station are 29.11.2012 and 25.8.2013 respectively and is within the tariff period 2009-14. However, the COD of Unit-III is 26.2.2015 and is covered within the scope of the 2014 Tariff Regulations. Accordingly, the multiplication factor of 0.90 is considered for working out the normative O & M expenses (annualized) for Unit-III of the generating station for the period 2014-19 and is allowed as under:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
23200.00	24664.50	26216.00	27869.00	29623.50

## Additional O & M Expenses for desalination plant

79. The petitioner has claimed additional O & M expenses of ₹441.00 lakh in 2014-15, ₹468.84 lakh in 2015-16, ₹498.33 lakh in 2016-17, ₹529.75 lakh in 2017-18 and ₹563.10 lakh in 2018-19 on estimation basis, towards chemicals, filters and membranes used in the desalination plant.



The petitioner has submitted that the plant is located near sea coast and there will be no water charges as the water will be made available from the sea itself.

80. The respondent, KSEB has submitted that the petitioner has claimed additional O & M cost on account of desalination plant over and above the normative O & M expenses allowed by the Commission. It has also submitted that the O & M expenses allowed in accordance with the 2014 Tariff Regulations have provision for meeting the expenses for desalination plant also and hence it has prayed that the said expenditure may be disallowed. The petitioner in its rejoinder has submitted that the generating station does not have any nearby water source and therefore the claim has been made for production of RO water and for other different purposes of the generating station and has accordingly prayed that the additional O & M charges claimed for desalination plant may be allowed.

81. The matter has been examined. It is noticed that the normative O & M allowed under the 2014 Tariff Regulations do not include expenses towards desalination plant. In view of this, the O & M expenses for desalination plant as claimed by the petitioner has been allowed. This is however subject to revision based on all relevant details to be furnished by the petitioner at the time of truing-up of tariff of the generating station in terms of Regulation 8 of the 2014 Tariff Regulations.

2014-15		2015-16	2016-17	2017-18	2018-19
1.4.2014 to 25.2.2015	26.2.2015 to 31.3.2015				
399.92	41.08	468.84	498.33	529.75	563.10

(₹ in lakh)

## Water Charges

82. Regulation 29(2) of the 2014 Tariff Regulations provide as under:

*“29.(2) The Water Charges and capital spares for thermal generating stations shall be allowed separately:*

*Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check.*

*The details regarding the same shall be furnished along with the petition:*

*Provided that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization”.*



83. In terms of the above regulation, water charges are to be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check of the details furnished by the petitioner. The details in respect of water charges such as type of cooling water system, water consumption, rate of water charges furnished by the petitioner is as under:

	<b>Remarks</b>
Type of Plant	Coal
Type of cooling ware system	Closed circuit cooling
Consumption of water	Sea Water at present
Rate of water charges	0.0
*Total water charges in 2013-14	0.0

84. The petitioner has submitted that at present the generating station is using sea water and is not paying any water charges. However, it has submitted that in future, if any water charges are levied on the generating station, it shall approach the Commission to claim the same under O&M expenses. The petitioner has further submitted the details on actual water charges paid for the relevant year shall be furnished at the time of truing-up of tariff and shall be subjected to retrospective adjustment. Since the petitioner has not claimed any water charges on projection basis during the period 2014-19, the same has not been considered in this order. The claim of the petitioner, if any, in future shall be considered in accordance with the 2014 Tariff Regulations.

85. Accordingly, the total O&M expenses including expenses for desalination plant and water charges claimed and allowed is summarized as under:

	<b>2014-15</b>		<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
	<b>1.4.2014 to 25.2.2015</b>	<b>26.2.2015 to 31.3.2015</b>				
Normative O&M Expenses claimed	14909.51	2202.18	25200.91	26714.33	28398.75	30186.60
<b>O&amp;M Expenses allowed</b>	14509.59	2161.10	24664.50	26216.00	27869.00	29623.50
Additional O&M expenses for desalination plant claimed	399.92	41.08	468.84	498.33	529.75	563.10
<b>Additional O&amp;M expenses for desalination plant Allowed</b>	399.92	41.08	468.84	498.33	529.75	563.10
Water Charges claimed	0.00	0.00	0.00	0.00	0.00	0.00
<b>Water Charges allowed</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total O&amp;M Expenses allowed</b>	<b>14909.51</b>	<b>2202.18</b>	<b>25133.34</b>	<b>26714.33</b>	<b>28398.75</b>	<b>30186.60</b>



## Capital Spares

86. The petitioner has not claimed capital spares on projection basis during the period 2014-19. Accordingly, the same has not been considered in this order. The claim of the petitioner, if any, at the time of truing-up, shall be considered on merits, after prudence check.

## Operational Norms

87. The operational norms considered by the petitioner in respect of the generating station are as under:

Target Availability	83.0
Heat Rate (kcal/kwh)	2375
Auxiliary power consumption %	6.69
Specific Oil Consumption (ml/kwh)	0.50

88. The operational norms claimed by the petitioner are discussed as under:

### Target Availability

89. Regulation 36 of the 2014 Tariff Regulations provides as under:

*(A) Normative Annual Plant Availability Factor*

*“(a) All Thermal generating stations, except those covered under clauses (b) (c) (d) &(e)- 85%.*

*Provided that in view of the shortage of coal and uncertainty of assured coal supply on sustained basis experienced by the generating stations, the NAPAF for recovery of fixed charges shall be 83% till the same is reviewed. The above provision shall be reviewed based on actual feedback after 3 years from 1.4.2014.”*

90. The petitioner has considered the Target Availability of 83% for the period 2014-19. The Commission, due to shortage of domestic coal supply has relaxed the Target Availability norm to 83% for first 3 years from 1.4.2014 and the same shall be reviewed after 3 years. Accordingly, in terms of the Regulation 36(A) of the 2014 Tariff Regulations, the Target Availability of 83% is considered for the period 2014-17 and 85% for the period 2017-19.

### Station Heat Rate (kcal/kwh)

91. Regulation 36(C)(b)(i) of the 2014 Tariff Regulations provides Station Heat Rate as under:

*(C) Gross Station Heat Rate*

*(b) New Thermal Generating Station achieving COD on or after 1.4.2014*

*(i) Coal-based and lignite-fired Thermal Generating Stations*

*= 1.045 X Design Heat Rate (kCal/kWh)*



Where the Design Heat Rate of a generating unit means the unit heat rate guaranteed by the supplier at conditions of 100% MCR, zero percent make up, design coal and design cooling water temperature/back pressure.

Provided that the design heat rate shall not exceed the following maximum design unit heat rates depending upon the pressure and temperature ratings of the units:

Pressure Rating (Kg/cm <sup>2</sup> )	150	170	170	247
SHT/RHT (°C)	535/535	537/537	537/565	565/593
Type of BFP	Electrical Driven	Turbine Driven	Turbine Driven	Turbine Driven
Max Turbine Heat Rate (kCal/kWh)	1955	1950	1935	1850
Min. Boiler Efficiency				
Sub-Bituminous Indian Coal	0.86	0.86	0.86	0.86
Bituminous Imported Coal	0.89	0.89	0.89	0.89
<b>Max Design Unit Heat Rate (kCal/kWh)</b>				
Sub-Bituminous Indian Coal	2273	2267	2250	2151
Bituminous Imported Coal	2197	2191	2174	2078

Provided also that where unit heat rate has not been guaranteed but turbine cycle heat rate and boiler efficiency are guaranteed separately by the same supplier or different suppliers, the unit design heat rate shall be arrived at by using guaranteed turbine cycle heat rate and boiler efficiency:

Provided also that where the boiler efficiency is below 86% for Subbituminous Indian coal and 89% for bituminous imported coal, the same shall be considered as 86% and 89% respectively for Sub-bituminous Indian coal and bituminous imported coal for computation of station heat rate:

Provided also that maximum turbine cycle heat rate shall be adjusted for type of dry cooling system:

Provided also that if one or more generating units were declared under commercial operation prior to 1.4.2014, the heat rate norms for those generating units as well as generating units declared under commercial operation on or after 1.4.2014 shall be lower of the heat rate norms arrived at by above methodology and the norms as per the Regulation 36(C)(a)(i).

92. The petitioner has furnished the design turbine cycle heat rate and boiler efficiency of all three units of the generating station as 1932 kcal/kWh and 85% respectively. Accordingly, the Unit design heat rate worked out is ₹2272.94 kcal/kWh (1932/0.85). In terms of the Regulation 36 (C)(b)(i) of the 2014 Tariff Regulations, new thermal generating stations achieving COD on or after 1.4.2014, the Gross Station Heat Rate= 1.045 X Design Heat Rate (kcal/kWh) i.e. 1.045 X 2272.94 = 2375.223. It also provides that the design heat rate shall not exceed the maximum design unit heat rates depending upon the pressure and temperature ratings of the units as specified by the Commission, where ceiling design heat rate for plants having temperature of 537/565 °C and pressure rating of 170 Kg/cm<sup>2</sup> using sub bituminous coal is given as 2250 kcal/kwh. The Design heat rate of the generating station is 2272.94kCal/kWh which is higher than the ceiling design heat rate of 2250 kcal/kwh. In view of this, the ceiling design heat rate of 2250



kcal/kwh has been considered as the Design heat rate for this generating station. Considering the multiplication factor of 1.045, the applicable Station Heat Rate is 2351.25 kcal/kwh (1.045 x 2250). This GSHR of 2351.25 kcal/kWh has been considered for the purpose of tariff for the period 2014-19. It is pertinent to mention that GSHR for Units- I & III was considered as 2421 kCal/kWh and hence the GSHR of 2351.25 kCal/kWh considered for 2014-19 is lower than the GSHR allowed for the period 2009-14.

### Auxiliary Power Consumption

93. Regulation 36(E)(a)(i) of the 2014 Tariff Regulation provides Auxiliary power consumption as under:

*(E) Auxiliary Energy Consumption*

*(a) Coal-based generating stations except at (b) below:*

	<b>With Natural Draft cooling tower or without cooling tower</b>
(i) 200 MW series	8.5%
<b>(ii) 300/330/350/500 MW and above</b>	
Steam driven boiler feed pumps	5.25%
Electrically driven boiler feed pumps	7.75%

*Provided further that for thermal generating stations with induced draft cooling tower, the norms shall be further increased by 0.5%.*

94. The petitioner has considered Auxiliary Power Consumption (APC) of 6.69 % which is not in accordance with the norm of 5.75% as specified by the Commission for 500 MW units with induced draft cooling, under the 2014 Tariff Regulations. The petitioner has considered APC of 6.69% to include the consumption for additional systems like coal transportation from port to project which consume about 6.0 MW and also additional electrical equipment installed for desalination of sea water through RO system which consume 5.25 MW (approx).

95. The petitioner was directed vide ROP of the hearing dated 16.2.2016 to submit the details of actual APC and the petitioner vide affidavit dated 3.5.2016 had furnished the following details:

<b>Period</b>	<b>Generation</b>	<b>APC in MU</b>	<b>APC in %</b>
COD of Unit-II (25.8.2013) to 31.3.2014	2875.55	206.32	7.17%
1.4.2014 to 25.2.2015	5025.96	355.93	7.08%
COD of Unit-III (26.2.2015) to 31.1.2016	7099.25	533.42	7.51%



96. It is noticed from the above that the APC furnished by the petitioner is higher than the APC of 6.69% considered by the petitioner. It has also submitted the additional electrical powers are required for the operation of cross country pipe conveyor system, Grab un-loader at Jetty installed for unloading of coal from the ship and desalination plant as there is no water source near the power plant and the project is designed to use sea water which will be converted as potable water for drinking, service water for different purposes and DM water for process make-up & equipment cooling make up through RO conversion. The petitioner vide affidavit dated 6.10.2015 has submitted that 5.99 MW is required for cross country pipe conveyor, 4.44 MW for Grab un-loader at Jetty(for unloading coal from the ship) and 5.26 MW electrical equipment (for desalination of sea water through RO system). Hence, it has submitted that an additional load of 15.69 MW has been considered for calculating the APC for the generating station i.e. additional 1.04% of the APC.

97. The auxiliary consumption due to special features like desalination of sea water, coal conveying system from port to station etc. have not been considered in the operational norms under the 2014 Tariff Regulations. It is observed that the station has special features for which there will be additional auxiliary consumption for running the additional systems like coal transportation from port to project and also additional electrical equipment installed for desalination of sea water through RO system. In this background, we are inclined to relax the operational norm for APC and allow the APC of 6.69% as claimed by the petitioner. The petitioner is however directed to furnish the detail of actual Auxiliary Power Consumption, PLF of the station since COD of Unit-III to 31.3.2019 at the time of truing up of the tariff.

### **Specific Oil Consumption**

98. Regulation 36(D)(a) of Tariff Regulations, 2014 provides for Secondary fuel oil Consumption of 0.50 ml/kWh for coal-based generating stations. Hence, the Secondary fuel oil Consumption considered by the petitioner is as per norms and is allowed.





## Interest on Working Capital

99. Sub-section (a) of clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

*“28. Interest on Working Capital:*

*(1) The working capital shall cover*

*(a) Coal based/lignite fired thermal generating stations*

*i) Cost of coal towards stock for 15 days for pit-head generating stations and 30 days for non-pit-head generating station for generation corresponding to the normative annual plant availability factor or the maximum coal stock storage capacity whichever is lower.*

*ii) Cost of coal for 30 days for generating corresponding to the normative annual plant availability factor.*

*iii) Cost of secondary fuel oil for two month for generating corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil.*

*iv) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 29.*

*v) Receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor; and*

*vi) Operation and maintenance expenses for one month.”*

## Fuel Components and Energy Charges in working capital

100. The petitioner has claimed the cost of fuel component in working capital based on price 'as fired' GCV of coal procured and burnt for the preceding three months i.e. January, 2014, February, 2014 and March, 2014 and secondary fuel oil for the preceding three months i.e. January, 2014, February, 2014 and March, 2014 as under:

	2014-15		2015-16	2016-17	(₹ in lakh)	
	1.4.2014 to 25.2.2015	26.2.2015 to 31.3.2015			2017-18	2018-19
Cost of Coal towards stock	11731.59	17734.87	17734.87	17686.41	17686.41	17686.41
Cost of Coal towards Generation	11731.59	17734.87	17734.87	17686.41	17686.41	17686.41
Cost of Secondary fuel oil 2 months	304.94	460.98	460.98	459.72	459.72	459.72

101. The respondent, KSEBL has submitted that the claim of the petitioner on this count is not in accordance with the 2014 Tariff Regulations. It has further submitted that the petitioner has not produced the certified copies of the bills showing the price of domestic coal, imported coal, GCV of domestic coal, GCV of imported coal. The respondent has also submitted that





receivables for calculation of working capital be revised based on the averments of the respondent for all components of fixed cost. The respondent, TANGEDCO has submitted that the claim of the petitioner for considering the GCV of coal on 'as fired' basis for the purpose of tariff determination is in deviation of the provisions specified under the Regulations. In response, the petitioner has submitted that the measurement of GCV was being carried out on 'as fired' basis till the month of March, 2014 as per the 2009 Tariff Regulations till 31.3.2014 and as such the petitioner was maintaining data of GCV on 'as fired' basis till March, 2014.

102. The Computation of Energy Charges and fuel component (coal cost) in working capital for the period 2014-19 is based on 'as received' GCV of coal. The Commission vide ROP of the hearing dated 27.2.2015 directed the petitioner to submit the GCV of coal on 'as received' basis. In response, the petitioner vide affidavit dated 4.6.2015 has submitted that they did not have suitable infrastructure for measurement of representative GCV on 'as received' basis.

103. The issue of 'as received' GCV for computation of energy charges was challenged by NTPC and other generating companies through writ petition in the Hon'ble High Court of Delhi. The writ petition was heard on 7.9.2015 and Hon'ble High Court of Delhi has directed that the Commission shall decide the place from where the sample of coal should be taken for measurement of GCV of coal on as received basis within 1 month on the request of petitioners.

104. The petitioner has furnished as billed GCV and as fired GCV of coal during preceding three months. However, the petitioner has not furnished the 'as received' GCV of coal as per the Commission's order dated 25.1.2016 in Petition no.283/GT/2014.

105. As per the directions of the Hon'ble High Court, the Commission vide order dated 25.1.2016 in Petition No. 283/GT/2014 has decided as under:

*"In view of the above discussion, the issues referred by the Hon'ble High Court of Delhi are decided as under:*

(a) *There is no basis in the Indian Standards and other documents relied upon by NTPC etc. to support their claim that GCV of coal on as received basis should be measured by taking samples after the crusher set up inside the generating station, in terms of Regulation 30(6) of the 2014 Tariff regulations.*

(b) *The samples for the purpose of measurement of coal on as received basis should be collected from the loaded wagons at the generating stations either manually or through the Hydraulic*



*Auger in accordance with provisions of IS 436(Part1/Section1)-1964 before the coal is unloaded. While collecting the samples, the safety of personnel and equipment as discussed in this order should be ensured. After collection of samples, the sample preparation and testing shall be carried out in the laboratory in accordance with the procedure prescribed in IS 436(Part1/Section1)-1964 which has been elaborated in the CPRI Report to PSERC.”*

106. The petitioner has claimed Energy Charge Rate (ECR) of 211.264 Paise/kWh based on the weighted average price, GCV of coal (as fired basis) & Oil procured and burnt for the preceding three months of January, 2014, February, 2014 and March,2014. It is observed that the petitioner has not placed on record the GCV of coal for preceding 3 months on ‘as received’ basis. In compliance with the direction of the Hon’ble High Court of Delhi, the Commission in its order dated 25.1.2016 in Petition No. 283/GT/2014 has clarified that the measurement of GCV of coal on as received basis shall be taken from the loaded wagons at the unloading point either manually or through the Hydraulic Augur. In the absence of GCV of coal on as received basis the present petition cannot be kept pending. Hence, the Commission has decided to compute the fuel components and the energy charges in the working capital by provisionally taking the GCV of coal on ‘as billed’ basis and allowing on adjustment for total moisture as per the formula given as under:

$$\frac{\text{GCV} \times (1-\text{TM})}{(1 - \text{IM})}$$

Where: GCV= Gross Calorific value of coal  
 TM=Total moisture  
 IM= Inherent moisture

107. In view of the above, the cost for fuel components in working capital have been computed at 83% NAPAF for the years 2014-15, 2015-16 and 2016-17 and at 85% NAPAF for the year 2017-18 & 2018-19 and based on ‘as billed’ GCV of coal and price of coal procured and secondary fuel oil for the preceding three months from January, 2014 to March 2014 and allowed as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Cost of Coal for stock- 30 days</b>	15700.93	15700.93	15700.93	16079.26	16079.26
<b>Cost of Coal for Generation- 30 Days</b>	15700.93	15700.93	15700.93	16079.26	16079.26
<b>Cost of Secondary fuel oil 2 months</b>	457.90	459.15	457.90	468.93	468.93



108. Energy charges for 2 months on the basis of “as billed” GCV of coal for the purpose of interest on working capital have been worked out as under:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
32295.89	32384.37	32295.89	33074.10	33074.10

### O & M Expenses (1 month)

109. O&M expenses for 1 month claimed by the petitioner for the purpose of working capital in Form-13 B is as under:

(₹ in lakh)

2014-15		2015-16	2016-17	2017-18	2018-19
1.4.2014 to 25.2.2015	26.2.2015 to 31.3.3015				
1370.08	1970.08	2100.08	2226.19	2366.56	2515.55

110. Regulation 28 (a) (vi) of the 2014 Tariff Regulations provides for O & M expenses for one month for coal based generating station. Accordingly, O&M expenses including water charges for 1 month is allowed as under:

(₹ in lakh)

2014-15		2015-16	2016-17	2017-18	2018-19
1.4.2014 to 25.2.2015	26.2.2015 to 31.3.3015				
1242.46	183.52	2094.45	2226.19	2366.56	2515.55

\* The difference in the claim of the petitioner and as allowed by the Commission for year 2014-15 is due to the fact that the petitioner has claimed the normative O & M and the Commission has allowed the actual O & M

### Maintenance Spares

111. The petitioner has claimed maintenance spares in the working capital as under:

(₹ in lakh)

2014-15		2015-16	2016-17	2017-18	2018-19
1.4.2014 to 25.2.2015	26.2.2015 to 31.3.3015				
3288.20	4728.20	5040.18	5342.87	5679.75	6037.32

112. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provide for maintenance spares @ 20% of the Operation & Maintenance expenses as specified in Regulation 29 of the 2014 Tariff Regulations. In terms of Regulation 29(2) of the 2014 Tariff Regulations and in line with Commission’s order dated 6.10.2015 in Petition No. 186/GT/2014 (Sugen CCPP), the maintenance spares @ 20% of O & M expenses allowed is as under:



(₹ in lakh)

2014-15		2015-16	2016-17	2017-18	2018-19
1.4.2014 to 25.2.2015	26.2.2015 to 31.3.2015				
2981.90	440.44	5026.67	5342.87	5679.75	6037.32

\* The difference in the claim of the petitioner and as allowed by the Commission in year 2014-15 is due to the fact that the petitioner has claimed the normative maintenance spares and the Commission has allowed the actual maintenance spares.

## Receivables

113. Receivables equivalent to two months of capacity charges and energy charges has been worked out and allowed as under:

(₹ in lakh)

	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 25.2.2015	26.2.2015 to 31.3.2015				
Fixed charges	18627.20	2634.40	29377.36	30537.69	30993.28	30794.83
Variable charges	29287.51	3008.38	32384.37	32295.89	33074.10	33074.10

## Rate of interest on working capital

114. Clause (3) of Regulation 28 of the 2014 Tariff Regulations provides as under:

*“Interest on working Capital: (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later.”*

115. In terms of the above regulations, SBI PLR of 13.50% has been considered for the purpose of calculating interest on working capital. Accordingly, Interest on working capital has been computed as under:

(₹ in lakh)

	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 25.2.2015	26.2.2015 to 31.3.2015				
O&M expenses	1242.46	183.52	2094.45	2226.19	2366.56	2515.55
Receivables (Fixed Charges)	18627.20	2634.40	29377.36	30537.69	30993.28	30794.83
Receivables (Variable Charges)	29287.51	3008.38	32384.37	32295.89	33074.10	33074.10
Maintenance Spares	2981.90	440.44	5026.67	5342.87	5679.75	6037.32
Cost of secondary fuel oil for two months	415.25	42.65	459.15	457.90	468.93	468.93
Cost of coal for stock (30 days)	14238.37	1462.55	15700.93	15700.93	16079.26	16079.26
Cost of coal for generation (30 days)	14238.37	1462.55	15700.93	15700.93	16079.26	16079.26
<b>Total Working Capital</b>	<b>81031.06</b>	<b>9234.49</b>	<b>100743.84</b>	<b>102262.39</b>	<b>104741.14</b>	<b>105049.25</b>
Interest Rate %	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Interest on Working Capital</b>	<b>10939.19</b>	<b>1246.66</b>	<b>13600.42</b>	<b>13805.42</b>	<b>14140.05</b>	<b>14181.65</b>



116. Accordingly, Annual fixed charges approved for the generating station for the period from 1.4.2014 to 31.3.2019 is summarized as under:

(₹ in lakh)						
	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 25.2.2015	26.2.2015 to 31.3.2015				
Return on Equity	23010.13	3360.71	38525.72	41249.51	42809.53	43409.62
Interest on Loan	37183.20	5307.31	57134.24	56721.98	54225.15	49954.71
Depreciation	25721.16	3689.53	41870.42	44734.88	46386.20	47036.42
Interest on Working Capital	10939.19	1246.66	13600.42	13805.42	14140.05	14181.65
O&M Expenses	14909.51	2202.18	25133.34	26714.33	28398.75	30186.60
<b>TOTAL</b>	<b>111763.20</b>	<b>15806.39</b>	<b>176264.14</b>	<b>183226.13</b>	<b>185959.69</b>	<b>184769.00</b>

### Energy Charge Rate

117. The petitioner has claimed an energy charge rate (ECR) of 211.264Paise/kWh for the period 2014-15 to 2018-19 based on the weighted average price, GCV of coal (as fired basis) & Oil procured and burnt for the preceding three months. The energy charge rate (ECR) as worked out based on operational norms specified in 2014 Regulations and on "As Billed" GCV of coal for preceding 3 months i.e. January, 2014 to March,2014 to January 2014, as worked out under may be considered for allowing 2 months Energy Charge in Working capital:

SI no.		Unit	2014-19
1	Capacity	MW	1500
2	Weighted average Gross Station Heat Rate	Kcal/kWh	2351.250
3	Weighted average Aux. Energy Consumption	%	6.69
4	Weighted average GCV of oil (as fired)	Kcal/lit	9960
5	Weighted average GCV of Coal (as Billed)	Kcal/kg	3998.517
6	Adjustment on account of coal received at the generating station for equilibrated basis (Air dried) in the billed GCV of Coal India		*
7	Weighted average price of oil	₹/KL	50382.035
8	Weighted average price of Coal	₹/MT	2985.00
9	Rate of Energy Charge ex-bus	Paise/kWh	190.413**

\* To be calculated by the petitioner based on the adjustment formula

\*\* To be revised as per the figures at Sr. No. 6

118. The GCV of coal as computed above shall be adjusted in the light of the GCV of coal on 'as received basis' computed by the petitioner as per our directions in order dated 25.1.2016 in Petition No. 283/GT/2014. The GCV of coal needs to be measured from the sample collected at the jetty for considering 'as received' basis in terms of provision of para 5 (sampling from ship during loading or unloading) and para 8 (sampling from loaded ships) of IS 436(Part-1/Section-1) -1964.



119. The petitioner shall compute and claim the Energy Charges on month to month basis from the beneficiaries based on the formulae given under Regulation 30(6)(a) of the 2014 Tariff Regulations read with Commission's order dated 25.1.2016 in Petition No. 283/GT/2014.

120. The Commission in its order dated 19.2.2016 in Petition No. 33/MP/2014 (TPDDL v NTPC & anr) had directed as under:

*"The respondents shall introduce help desk to attend to the queries and concerns of the beneficiaries with regard to the energy charges. The contentious issues regarding the energy charges should be sorted out with the beneficiaries at the senior management level, preferably at the level of Executive Directors."*

Accordingly, in line with the above decision, help desk shall be introduced by the petitioner and contentious issues if any, which arise in respect of energy charges for this generating station shall be sorted out with the beneficiaries at the Senior Management level.

#### **Application filing fee and Publication Expenses**

121. The petitioner has sought reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the period 2014-19. The petitioner has deposited filing fees of ₹4604800/- for the year 2014-15, ₹6600000/- for the year 2015-16 and ₹6600000/- in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. Accordingly, in terms of Regulations 52 of the 2014 Tariff Regulations, we direct that the petitioner shall be entitled to recover *pro rata*, the filing fees and the expenses incurred on publication of notices directly from the respondents, on production of documentary proof. The filing fees for the remaining years of the tariff period 2017-19 shall be recovered *pro rata* after deposit of the same and production of documentary proof.

122. The annual fixed charges approved for the period 2014-19 as above are subject to truing up in terms of Regulation 8 of the 2014 Tariff Regulations.

123. Petition No. 277/GT/2014 is disposed of in terms of above.

Sd/-

Sd/-

Sd/-

Sd/-

**(Dr. M.K. Iyer)**  
Member

**(A.S. Bakshi)**  
Member

**(A.K. Singhal)**  
Member

**(Gireesh B. Pradhan)**  
Chairperson





**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 135/GT/2015**

**Coram:**

**Shri Gireesh B. Pradhan, Chairperson**

**Shri A.K.Singhal, Member**

**Shri A. S. Bakshi, Member**

**Dr. M. K. Iyer, Member**

**Date of Order: 11.7.2017**

**In the matter of**

Approval of tariff of coal based NLC Tamil Nadu Power Limited TPS (1000 MW) for the period from the date of declaration of commercial operation of Units-I & II till 31.3.2019

**And**

**In the matter of**

NLC Tamil Nadu Power Limited  
(a joint venture of NLC & TANGEDCO)  
Harbour Estate, Tuticorin-628004

**...Petitioner**

Vs

1. Transmission Corporation of Andhra Pradesh  
VidyutSoudha, Khairatabad,  
Hyderabad – 500082
2. Southern Power Distribution Company of Andhra Pradesh Ltd,  
D. No: 19-13-65/A, Srinivasapuram  
Tiruchhanur Road, KesavayanaGunta,  
Tirupati (AP) – 517501
3. Eastern Power Distribution Company of Andhra Pradesh Ltd  
Corporate Office P&T Colony, Seethammadhara,  
Visakhapatnam (AP) – 530013
4. Transmission Corporation of Telangana Ltd  
VidyutSoudhaKhairatabad,  
Hyderabad – 500082
5. Northern Power Distribution Company of Telangana Ltd.  
H.No 1-1-504, Opp. NIT petrol pump,  
Chaityanarayani colony, Hanamkonda  
Warangal (Telangana) – 506004
6. Southern Power Distribution Company of Telangana Ltd  
2<sup>nd</sup> Floor, H.No. 6-1-50, Mint Compound  
Hyderabad – 500063
7. Power Company of Karnataka Ltd  
KPTCL Complex, KaveriBhawan  
Bangalore – 560009
8. Bangalore Electricity Supply Company Ltd  
Krishna Rajendra Circle  
Bangalore – 560001





9. Mangalore Electricity Supply Company Ltd  
Paradigm Plaza A.B Shetty circle  
Mangalore – 560009

10. Chamundeshwari Electricity Supply Company Ltd  
Corporate Office No. 927, L.J Avenue  
New KantharajUrs Road, Saraswathipuram  
Mysore – 570009

11. Gulbarga Electricity Supply Company Ltd  
Main Road, Gulbarga  
Karnataka – 585102

12. Hubli Electricity Supply Company Ltd  
PB.Road, Navanagar  
Hubli – 580025

13. Kerala State Electricity Board  
VaidyuthiBavanam, Pattom  
Thiruvananthpuram – 695004

14. Puducherry Electricity Department  
137, NSC Bose Salai  
Puducherry – 605001

15. Tamilnadu Generation and Distribution Corporation Ltd  
NPKRR Maaligai, 144, Annasalai,  
Chennai – 600002

...Respondents

**Parties present:**

Shri M.G. Ramachandran, Advocate, NLC  
Ms. AnushreeBardhan, Advocate, NLC  
Shri S. GnanaPrabhakaran, NLC  
Shri S. Vallinayagam, Advocate, TANGEDCO  
Shri R. Jayaprakash, TANGEDCO

**ORDER**

This petition has been filed by the petitioner, NLC TamilNadu Power Limited (in short 'NTPL') for approval of tariff of NLC TamilNadu Power Limited TPS (2 x 500MW) ('the generating station/project') for the period from the date of commercial operation (COD) of Units-I & Unit-II till 31.3.2019, based on the provisions of the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014 ('the 2014 Tariff Regulations').

2. The petitioner is a joint venture Company of Neyveli Lignite Corporation (NLC) and TANGEDCO and is a subsidiary of NLC Ltd. The said joint venture company was incorporated on 18.11.2005 to implement the power project (coal fired) at Tuticorin and the promoters namely, NLC and TNEB/TANGEDCO share the equity in ratio of 89:11 respectively. This coal based thermal power



project is located at Harbour estate of Tuticorin Port Trust (TPT) and is adjacent to the Tuticorin Thermal Power station in Tamilnadu.

3. The Investment Approval of the project comprising of two units of 500 MW each was sanctioned on 12.5.2008 by the Govt. of India at a cost of ₹4909.54 crore at April, 2007 Price Level. As per Govt. of India guidelines, the Revised Cost Estimate (RCE) was submitted and approved on 9.12.2013 by GOI. The approved project cost as per RCE-I is ₹6602.74 crore, including IDC, at June, 2013 Price Level. Further, RCE-II of ₹7293.48 crore was approved by GOI on 27.4.2016 including IDC of ₹1379.15 crore of Foreign Exchange component of ₹93.11 crore equivalent to US \$18.10 million at June 2015 price level. The petitioner has entered into Power Purchase Agreements (PPA) with the respondent beneficiaries and the Ministry of Power, Govt of India has allocated the power generated from this project amongst the respondent beneficiaries on 9.8.2010, as under:

Tamil Nadu	387 MW
Andhra Pradesh &Telangana	254.6 MW
Karnataka	157.9 MW
Kerala	72.5 MW
Puducherry	9.5 MW
Un-allocated	118.5 MW

4. The petitioner vide affidavit dated 8.5.2015 had sought approval of tariff of the generating station from the anticipated date of commercial operation of Units-I (30.4.2015) and Unit-II (15.5.2016) till 31.3.2019. However, the Commission vide order dated 13.10.2015 had granted interim tariff on *pro rata* basis for the period from the anticipated COD of Units-I&II till 31.3.2017as under:

	(₹ in lakh)		
	Anticipated COD of Unit-I (30.4.2015to 14.5.2015)	Anticipated COD of Unit-II (15.5.2015to 31.3.2016)	2016-17
Return on Equity	600.20	22925.45	26058.12
Interest on Loan	762.97	28187.41	29796.34
Depreciation	528.32	20179.83	21742.08
Interest on Working Capital	196.33	8200.84	9291.33
O&M Expenses	348.57	14965.08	18080.00
<b>Total</b>	<b>2436.38</b>	<b>94458.61</b>	<b>104967.87</b>

5. Pursuant to the COD of Unit-I on 18.6.2015 and Unit-II on 29.8.2015, the petitioner vide affidavit dated 29.3.2016 amended the petition based on actual COD of the units and has sought approval of



tariff from the COD of the Units-I & II till 31.3.2019. Accordingly, the annual fixed charges claimed by the petitioner for the period from COD of Unit-I (2015-16) till 2018-19 is as under:

	2015-16		2016-17	2017-18	2018-19
	18.6.2015 to 28.8.2015	29.8.2015 to 31.3.2016			
Depreciation	3195	19302	31758	31758	31758
Interest on Loan	4235	25021	38622	34830	31823
Return on Equity	3613	21833	36994	36994	36994
Interest on Working Capital	1004	6124	10515	10618	10643
O & M Expenses	1673	10039	18080	19220	20430
<b>Total</b>	<b>13720</b>	<b>82318</b>	<b>135971</b>	<b>133420</b>	<b>131649</b>

6. In compliance with the directions of the Commission, the petitioner has filed additional information with copies to the respondents. The respondents, TANGEDCO and KSEB have filed their replies and the petitioner has filed its rejoinder to the said replies. The matter was heard on 29.9.2016 and the Commission after directing the petitioner to file certain additional information reserved its orders in the petition. Based on the submissions of the parties and the documents available on record, we proceed to determine the tariff of the generating station for the period 2014-19 as stated in the subsequent paragraphs.

### Commissioning schedule

7. The Investment approval of the project was sanctioned by the Govt. of India on 12.5.2008 and the main plant was awarded on 28.1.2009. The schedule date of declaration of commercial operation of Unit-I was 11.3.2012 and Unit-II was 11.8.2012. As stated, the actual date of commercial operation of Unit-I is 18.6.2015 and Unit-II is 29.8.2015, thereby resulting in the delay of 39.23 and 36.60 months from the schedule, as summarized hereunder:

Unit No	Original schedule as per Ministry of Coal, GOI	Actual COD	Time overrun (in months)
I	11.3.2012	18.6.2015	39.23
II	11.8.2012	29.8.2015	36.60

### Admissibility of additional ROE

8. The date of original investment approval for the project is 12.5.2008. In order to avail the additional ROE of 0.5%, the completion time line specified under the 2014 Tariff Regulations for green field projects (Coal/lignite) with a unit size of 500 MW/600 MW from the date of investment approval is



44 months, with subsequent units at an interval of 6 months each. The original schedule as per MoC guidelines were 11.3.2012 and 11.8.2012 for Unit- I and Unit-II of the generating station respectively and the actual COD of Unit-I is 18.6.2015 and Unit-II is 29.8.2015. Hence, there is a time overrun of 39.23 months in the COD of Unit-I and 36.60 months in the COD of Unit-II, from the date of investment approval. As the units of the project have been declared under commercial operation beyond the completion timeline specified under the 2014 Tariff Regulations, we are not inclined to grant additional ROE of 0.5%. Accordingly, the generating station is not entitled to the additional return on equity of 0.5% which is allowed for timely completion of the Project.

### **Time Overrun**

9. The petitioner vide affidavit dated 8.5.2015 has stated that the delay from the RCE is 14 months for Unit-I and considering the first investment approval, it is 37 months. It is also submitted that site encumbrances and technical issues such as change of foundation type to suit local soil conditions, etc. which are beyond the control of the petitioner have contributed to the delay during the construction period. The petitioner has further submitted that the project could not proceed faster during/ after the first synchronization due to unforeseen technical problems which surfaced while operating the unit. The petitioner vide Annexure-VI of the said affidavit has furnished the causes of delay through delay analysis and endorsed by the project consultant M/s MECON. The petitioner has submitted that due to various delays in rerouting of existing power lines and water lines along the length and breadth of the project, unforeseen rain, unprecedented wind power and commissioning delays are major contributing factors for the delay in commissioning of the plant. A cursory view of the delay in achieving milestone activities as tabulated by the petitioner is as under:

<b>Sl.No.</b>	<b>Milestone/ Event</b>	<b>Occurrence date</b>	<b>Quantified delay</b>
a	Unit-I Boiler Light up	19.3.2014	29 months
	Unit-II Boiler Light up	23.9.2014	30 months
b	Unit-I Synchronization		
	i) With coal firing	10.3.2015	37 months
c	Unit-I COD	30.4.2015	36 months
d	Unit-II COD	15.5.2015	33 months



10. Accordingly, the petitioner has furnished the reasons for the delay during the project execution stage and the delay during the commissioning and has submitted that the same were beyond the control of the petitioner. The petitionervide affidavit dated 29.3.2016 has furnished the reasons for delay in declaration of COD of the project, under the following heads:

**Delay due to Environmental clearance**

**(a) Forest clearance**

(i) The petitioner had taken 102.465 Ha of land from VOCPT on long term lease basis for setting up of the Thermal Power Project, out of which about 59 Ha of land was marked as "Kaadu" (Forest) in the revenue records, which is a part of about 1200 Acres of land notified in the year 1923 and handed over to Tuticorin Port Trust Authorities for management, though the above area was devoid of forest cover and has long back been used for non-forestry purpose under the orders passed by the competent authorities from time to time. However, the said land legally continues to be reserved forest as it was never de-notified. The situation necessitated VOCPT to approach the Hon'ble Supreme Court of India for permission and seek the approval of Central Government under section 2 of the Forest (Conservation) Act, 1980 for the de-reservation of the said forest land.

(ii) Since beginning of the project, NTPL had been communicating with VOCPT (Lessor of the land) and the concerned officials of the Forest Department for getting forest clearance for the land at the earliest possible.

(iii) Following the GOI sanction for the project in May-2008, various package contracts were awarded during the year 2009 & 2010 and the site construction activities have started picking momentum during the year 2011. Considering the escalation of site activities following the award of contract and also considering the fact that, forest clearance for the land was a prerequisite for signing Fuel Supply Agreement (FSA) for the project with Mahanadi Coalfields Ltd (MCL), NLC/NTPL was steadfastly and closely following up this issue with VOCPT and GoTN at various levels for securing forest clearance for the land at the earliest possible.

(iv) Because of the relentless efforts taken by the NLC/NTPL, Chief Secretary/GoTN has finally convened a meeting with concerned authorities to deliberate on the issue on 26.03.2013 and during the meeting VOCPT was advised to file an Interlocutory Application (IA) with the Supreme Court of India seeking permission for de-notification of the forest land and accordingly VOCPT had filed IA with Supreme Court of India on 26.08.2013. The real breakthrough in the forest clearance issue could be achieved only when the Supreme Court of India has issued an order during March 2014 on the IA filed by VOCPT, accepting the recommendation of the Central Empower Committee of Supreme Court of India. Pursuant to the Supreme Court of India order VOCPT has submitted application for seeking approval under section 2 of the Forest (Conservation) Act 1980 for the de-reservation of the 457.25 Ha of forest land with Conservator of Forest on 11.3.2014. Further VOCPT has deposited ₹200275500/- with "Compensatory Afforestation Fund Management and Planning Authority" CAMPA on 17.3.2014 as Net Present Value for 457.25 Ha of land as per the Supreme Court of India directive. With the Order of the Supreme Court of India, the matter has started moving on a fast track. Govt. of TN has forwarded the recommendation of the Principal Chief Conservator



of Forest, Chennai for the de-reservation of the of 457.25 Ha of forest land to Assistant Inspector General of Forest, MOEF, GOI on 16<sup>th</sup> July 2014. Subsequently Addl. PCCF and Dy. Director, MOEF visited the site on 18.09.2014 and submitted a report to Addl. Director General of Forest, MoEF.

(v) The proposal for the de-reservation of 457.25 ha of Mullakadu reserved forest land was discussed in the Forest Advisory Committee (FAC) meeting held on 28.11.2014 at New Delhi and the FAC has recommended the State Government proposal for the de-reservation of the forest land, subject to certain conditions. Subsequently VOCPT/State Government has complied with the all the requirements of FAC and MOEF has communicated its in-principle approval for the de-reservation of the Forest land on 16.4.2015 subject to compliance of certain conditions. On the basis of the compliance report given, MOEF has accorded approval for the de-reservation of the 457.25 Ha of reserved forest land on 12.5.2015. Ultimately the 457.25 ha of Mullakadu reserved forest land in Thoothukudi has been de-reserved vide G.O (MS) No.66 dated: 02.06.2015 of Environment and Forest Department, GoTN. Tamil Nadu Government Gazette notification to this effect was issued on 24.6.2015.

#### **(b) Wildlife clearance**

(i) The Project is located 6.2KM South/South West of Gulf of Mannar National Marine Park boundary. As the project is located within 10 KM from Gulf of Mannar National Marine Park boundary, the provisions of Wildlife (Protection) Act, 1972 were applicable. Similarly one of the conditions of the Environmental Clearance under EI A notification 2006 accorded for the project on 13th June 2007 stipulates that, clearance under Wildlife (Protection) Act 1972 is to be obtained from competent authority. In the early stages of the project itself, NLC had sought for Wildlife Clearances for the project. The Chief Wild Life Warden (CWLW), Chennai after considering the various details furnished by NLC, accorded No Objection Certificate (NOC) to the project subject to certain conditions on 21.05.2009 and was forwarded to MOEF, New Delhi.

(ii) However, on 28.12.2010, Wildlife department of MoEF, New Delhi addressed to Chief Wildlife warden, Chennai requesting to provide a detailed factual report, whether the project involves intake and release of water from Gulf of Mannar. Based on this, the Wildlife warden, Ramanathapuram and Conservator of Forest, Virudhunagar visited the Project Site and asked for a report on Baseline Information of flora and fauna in the Marine Environment towards the National Park. The work was carried out by M/s.SuganthiDevadasan Marine Research Institute (SDMRI), Tuticorin and the reports were submitted to the Wildlife Authorities.

(iii) In the meeting convened by Principal Secretary, Energy, GoTN on 23.11.2011, the Chief Wildlife Warden had informed that the baseline data submitted is not sufficient and a comprehensive study on bio diversity impact assessment and allied issues has to be carried out by an accredited agency of Govt.of India. Accordingly the study of impact assessment as required by Wildlife department was carried out by M/s Cholamandalam MS Risk services, Chennai and they have submitted the report on 16.04.2012. The Report along with the required application for Wildlife clearance in Form I & II was handed over to Wildlife warden, Ramanathapuram on 02.05.2012 for consideration and recommendation. The Principal Secretary, Environment and Forests had forwarded the applications along with Form V to the Inspector General of Forests, MoEF, New Delhi on 1.11.2012 recommending the project under





Wildlife protection Act, 1972 and to place the proposal before the Standing Committee of National Board for Wildlife (NBWL).

(iv) The proposal for the Wildlife Clearance for the Project was listed in the 28th meeting of the Standing Committee of National Board for Wildlife held on 20.03.2013. However the proposal was deferred by the Committee as it had not been considered by the Tamil Nadu State Board for Wildlife (SBWL). State Board for Wildlife was not in existence at that point of time. The Wildlife clearance for the project was again listed in the agenda of the 30th meeting of the NBWL on 04.09.2013 and the proposal was deferred citing that, the proposal has to be recommended by the SBWL. The proposal was again discussed in the 31st meeting of the Standing Committee of NBWL held on 12th & 13th August 2014. However the proposal was deferred again for want of recommendation from SBWL. NTPL had followed up with GoTN for early constitution of the SBWL and consideration of NTPL Wildlife clearance proposal. Government of Tamilnadu reconstituted the State Board for Wildlife (SBWL) vide GO. No. 178 dated 6.11.2013 and the SBWL meeting held on 11.9.2014 has considered the wildlife clearance proposal of NTPL and forwarded its recommendation to MoEF, GOI to place it before the National Board for Wild Life for consideration.

(v) The 32nd meeting of the Standing Committee of the NBWL held on 21.1.2015 recommended the proposal for Wildlife clearance of the project. PCCF & Chief Wildlife Warden, Chennai, vide letter dated 14.5.2015 informed that, the above recommendation of NBWL constitutes clearance of the project in wildlife angle. The Project Monitoring Group (PMG), Cabinet Secretariat, GOI had played a vital role in securing the Forest & Wildlife Clearances for the project. PMG closely monitored the project during the year 2014-15 with a special thrust on Forest & Wildlife Clearances for the project and resulted in Forest Clearance for the project in the month of June-2015 & Wildlife clearance for the project in the month May-2015.

### **(c) Coastal Regulation Zone clearance**

(i) An application was submitted by NTPL to the District Environmental Engineer on 27.5.2005 for clearance under `Coastal Regulation Zone (CRZ). It was considered by the Tuticorin District Coastal Zone Management Authority and the application was forwarded to Tamil Nadu State Coastal Zone Management Authority (TNCZMA). On the recommendation of TNCZMA on 17.10.2006, the Principal Secretary, Environment and Forest, GoTN forwarded the application to National Coastal Zone Management Authorities (NACZMA), MoEF, New Delhi for further clearance.

(ii) The Project was appraised in the Expert Appraisal Committee (EAC), CRZ in its 79th meeting held on 27 & 28.8.2009 and the committee raised some points for clarification. After deliberating on the clarifications submitted by NTPL, the EAC recommended the issue of CRZ clearance in the 81st meeting held on 29 & 30.10.2009. However CRZ clearance and Wildlife clearances are interrelated subjects, the issue of CRZ clearances for the project also got delayed. CRZ Clearance for the project was accorded by MOEF/GOI on 11.4.2014, subject to compliance of the certain terms & conditions as specified therein.

(iii) COD of Units were achieved within the time frame of 6 months from the initial Synchronization mandated by regulations. Thus, it can assume that there was no delay in respect of the period from first synchronization to COD.



**(d) Delay due to hostile climatic conditions**

**Unprecedented Rainfall**

(i) Before taking up the area grading to higher level, the project area was low lying and undulated. Though the project area is near to sea, no natural drainage was available for this area. Due to these reasons, during the month of November, 2009 and December 2009 heavy rain, much more than the average rainfall, has occurred and caused flooding the project area. At the early stage of project execution and unexpected inundated rainfall, most of the contractors were not equipped with proper dewatering pumps. This caused a delay of about four months in the commencement of civil works. In the year 2014, Tuticorin experienced heavy downpour more than the average. As the project area was flooded and works hampered for about 20 days during Nov'14-Dec'14. Apart from this monsoon rain, about 85 days works were hindered on account of unseasonal rains in the period from March 2009 to Oct, 2014. Also, after each and every rainfall, the project land became slushy and made the surface un-motorable till the water dries out.

**Heavy wind**

(ii) Every year in the months of June, July and August in Tuticorin area, the wind blows heavily along with dust storm much more than the average velocity. Due to this higher elevation works like Chimney, Cooling towers and precision mechanical erection works in Boilers and Power house were hampered. A total delay of about one month in all packages is quantifiable on account of dust storm.

**(e) Delay due to ban on sand supply**

(i) During April, 2011, Government of Tamilnadu has banned the quarrying of river sand in this locality as a measure to regularize the supply of river sand and to check illegal mining. Due to this ban, sand supply from these river sources got disturbed and in turn concreting progress suffered in the months of May, 2011 & June,2011 in all the packages and this caused a delay of one month.

**(f) Delay due to shortage of water supply.**

(i) Tuticorin area is facing heavy water scarcity during the months of April, May & June in every year. In the year 2012 & 2013 heavy shortage of water supply for construction purpose was experienced. Due to this water shortage in the year 2012 & 2013, construction activities were hampered and delayed about one month on account of this in entire project.

**(g) Delay due to fatal accident.**

(i) Though NTPL had ensured highest safety practices by the package contractors at erection site, due to fatal accidents occurred during the erection activities in various packages and subsequent labour unrest in the whole project, about 7 days of site works was lost.

**(h) Delay due to shortage of skilled and unskilled manpower.**

(i) In general there was heavy shortage of both skilled and unskilled manpower in all the packages throughout the execution phase. As the locality of the project area is heavily industrialized in addition to the fishing industry, local manpower availability is very meagre to cater the requirement of NTPL project and turnkey contractors had to mobilise majority of





manpower strength from northern parts of the country and these migrated manpower didn't wish to continue in Tuticorin due to its southernmost geographical location. Several correspondences and discussions even by highest officials of NTPL to improve the man power could not be realized. Package contractors were informing that the labours are not continuing for the reason cited above. Due to lesser manpower deployment, works like Concreting, Fabrication and Erection of Structures, Boiler and ESP erection, Pressure parts erection and civil & mechanical works in other areas as well were delayed abnormally. This situation prevailed in all the packages almost during the entire period of project execution.

**(i) Delay due to location disadvantages**

- a. Inadequacy of land.
- b. Location compulsion.
- c. Varying soil characteristics.
- d. Higher ground water table.

**(j) Delay in the carrying out the work/clearance from the agencies.**

- a. Rerouting of TWAD water pipe line.
- b. Rerouting of Ammonia and Naphtha line.
- c. Sea water intake approval from Port trust & TNEB.
- d. Outfall pipeline routing approval by TNEB.
- e. Handling over of North Cargo berth by VOCPT.

**(k) Delay in execution of work by package contractors**

(i) The petitioner has further submitted that apart from some delay on the part of package contractors including BHEL, the main reason for delay in the commissioning of the project is attributable to the delay in getting the wildlife and Forest clearances. However, the petitioner had not quantified the period of delay due to delay in environmental clearances.

11. The Commission vide ROP of the hearing dated 2.8.2016 had directed the petitioner to furnish additional information towards justification for time overrun as under:

*“Detailed justification of time overrun of 39.23 months for Unit-I and 36.60 months for Unit-II from the scheduled COD. The reasons for delay shall be explained with PERT chart giving details of working days/ months lost with relevant documentary evidence, wherever necessary. Measures taken for reduction of the delays/ problems faced during execution of the project alongwith the supporting documents/ correspondence exchanged between the parties/ agencies”*

12. In compliance to the directions of the Commission, the petitioner vide affidavit dated 2.9.2016 has furnished detail justification for time overrun along with the PERT chart and has made similar submissions as in affidavit dated 29.3.2016.



## **Submission of the Respondents**

### **TANGEDCO**

13. The respondent, TANGEDCO has mainly submitted as under:

- a) The main reason for the delay in commissioning of the project is attributable to the delay in getting the wild life and forest clearances of the project. Moreover the land to the extent of 102.465 ha has only been acquired on lease basis by the petitioner. Out of the total requirement of 102.465 ha lease hold land, only 59 ha of land was marked as Forest in the revenue records and hence, the reason behind getting approval for de- reservation for 457.25 ha has not been furnished by the petitioner. The petitioner has also not furnished the details of quantum of works affected due to non- availability of forest land. It is ascertained that there was no stoppage of works which have occurred due to non- availability of forest clearance and therefore the delay in getting forest clearance cannot be a reason for the delay in commissioning of the project.
- b) The investment approval for the project was sanctioned during May,2008 and the petitioner should have taken steps to identify the land for earlier commissioning of the project. However, the petitioner after a lapse of five years, had approached the govt. of Tamilnadu in the year 2013. Hence the delay on the part of the petitioner in execution of the project has resulted in abnormal delay in commissioning of the project after a span of nearly 4 years from scheduled COD.
- c) The petitioner has not furnished any communication with regard to the delay in signing the Fuel Supply Agreement (FSA) with Mahanadi Coal fields Ltd.(MCL) Moreover, fuel supply activities will take place only after the completion of plant works. Accordingly, the petitioner may be directed to furnish the details of FSA with MCL to ascertain the clauses necessitating forest clearance.
- d) No documentary evidence/ communication made with the wildlife department have been furnished indicating that the delay in commissioning of the project is due to non- availability of wildlife clearance.
- e) No documentary evidence has been furnished by the petitioner indicating that the delay in commissioning of the project beyond the schedule COD is only due to non- availability of CRZ clearance. Hence the claim of the petitioner as regards delay in getting wildlife clearance is not justifiable.
- f) The delay in commissioning of the project on account of the delay in getting forest clearances, wild life clearance and CRZ clearance and procurements fall under the controllable factors in terms of Regulation 12 of the 2014 Tariff Regulations.

Accordingly, the respondent has prayed that the claim of the petitioner to consider the delay in commissioning of the project may be rejected and the capital cost and IDC may be restricted upto the scheduled COD of the project.



## **KSEBL**

14. The respondent, KSEBL has mainly submitted as under:

- a) The delay in 10 months for boiler and 12 months for power house are due to lack of proper planning and insight at the time of preparation of original sanction and hence the delay due to these factors is purely attributable to the petitioner.
- b) Undue delay has been observed in the tendering and finalization of various works and hence the delay is purely attributable to the contractor and may be disallowed.
- c) No justification has been furnished by the petitioner as regards the delay of 15 months in the erection works of coal conveyors on North cargo berth and hence the delay may be disallowed. Moreover, the delay in execution of almost all works is purely attributable to the petitioner and the contractors engaged by the petitioner.

15. Accordingly, the respondent has submitted that the delay in commissioning the project has occurred due to the slackness in project management and lack of proper insight and co-ordination with equipment suppliers. It has further submitted that the petitioner has not taken appropriate project monitoring and management measures to achieve the COD of the generating station within the scheduled completion time. Accordingly, the respondent has prayed that in terms of the judgment of the Tribunal, the entire cost due to time overrun may be borne by the generating company.

### **Analysis and decision**

16. We have examined the submissions of the parties and the documents available on record. The Appellate Tribunal for Electricity (the Tribunal), in the judgment dated 27.4.2011 in Appeal No. 72 of 2010 has laid down the following principles for prudence check of time overrun and cost overrun of a project :

*"7.4. The delay in execution of a generating project could occur due to following reasons:*

*Due to factors entirely attributable to the generating company, e.g.,*

*i) imprudence in selecting the contractors/suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors/suppliers as per the terms of contract, mismanagement of finances, slackness in project management like improper co-ordination between the various contractors, etc.*

*ii) due to factors beyond the control of the generating company e.g. delay caused due to force majeure like natural calamity or any other reasons which clearly establish, beyond any doubt, that there has been no imprudence on the part of the generating company in executing the project.*

*iii) Situation not covered by (i) & (ii) above.*



*In our opinion in the first case the entire cost due to time over run has to be borne by the generating company. However, the Liquidated Damages (LDs) and insurance proceeds on account of delay, if any, received by the generating company could be retained by the generating company. In the second case the generating company could be given benefit of the additional cost incurred due to time over-run. However, the consumers should get full benefit of the LDs recovered from the contractors/suppliers of the generating company and the insurance proceeds, if any, to reduce the capital cost. In the third case the additional cost due to time overrun including the LDs and insurance proceeds could be shared between the generating company and the consumer. It would also be prudent to consider the delay with respect to some benchmarks rather than depending on the provisions of the contract between the generating company and its contractors/suppliers. If the time schedule is taken as per the terms of the contract, this may result in imprudent time schedule not in accordance with good industry practices.*

*7.5. In our opinion, the above principles will be in consonance with the provisions of Section 61(d) of the Act, safeguarding the consumers' interest and at the same time, ensuring recovery of cost of electricity in a reasonable manner. "*

17. As stated, there is a time overrun of 39.23 months and 36.60 months in the COD of Unit-I & Unit-II respectively. The petitioner was directed vide ROP of the hearing dated 2.8.2016 and 29.9.2016 to furnish the reasons for delay alongwith PERT chart giving details of activities delayed, working days/months lost (quantification of days) with relevant documentary evidence with scheduled start date, scheduled completion date, actual start date, actual completion date. In response, the petitioner vide affidavit dated 2.9.2016 and 4.11.2016 have submitted the details and it could be inferred from the said submissions that the reasons attributed to the delay in the commissioning of the project is on account of the delay in getting (i) Forest clearance (ii) Wildlife clearance and (iii) CRZ clearance. However, from the PERT chart and the details of the activities furnished by the petitioner, the delay in different activities for Unit-I & Unit-II is compiled and examined as under:

Sl. NO	Activity	Scheduled Start Date	Scheduled completion date	Actual start date	Actual completion date	Delay Period (months)
<b>Unit-I</b>						
1	Civil work for Boiler erection	February 2009	November,2009	December,2009	October,2010	10
2	Drum Lifting	April,2010	May,2010	September,2011	September,2011	15
3	Hydro test	March,2011	April,2011	August,2012	September,2012	16
4	Lighting up	October,2011	October,2011	March,2014	March,2014	28
5	Synchronization	January,2012	January,2012	December,2014	February,2015	37
6	COD		March ,2012		June,2015	
<b>Unit-II</b>						
1	Start of boiler erection	April,2010	May,2010	November,2010	December,2010	6
2	Drum Lifting	September,2010	October 2010	September,2011	September,2011	10
3	Hydro test	August,2011	September 2011	August,2012	November,2012	13
4	Lighting up	March,2012	March 2012	September,2014	September,2014	29
5	Synchronization	June,2012	June,2012	September,2014	April,2015	33
6	COD		August,2012		August,2015	36



### **Delay due to Start of Civil works for boiler erection**

18. The petitioner has submitted that there is a delay of 10 months and 6 months in completion of the civil works for boiler erection for Unit-I and Unit-II of the generating station respectively. In justification of the same, the petitioner has submitted that the delay is on account of geological surprises i.e change in type of foundations, heavy rain and flooding during November and December, 2009 and consequent dewatering of the site which has affected the civil works. It is evident from the affidavit dated 4.11.2016 that the first drawing of boiler foundations and Power house were to be submitted by the petitioner by 28.1.2009, but the same was submitted during the months of November, 2009 and January, 2010 respectively due to the delay in finalization of type of foundations. As per the contract technical specifications, the turn key contractors were to conduct the confirmatory soil investigation and the conservative results were to be adopted for foundation design but because of the varying soil characters and unpredictable layers of soft disintegrated rocks & clayey layers, the Package contractors had to change the approved drawings from Open foundation to Pile foundation and vice versa according to the local condition of the sub soil characteristics. It is also noticed that the delay due to geographical conditions was aggravated by heavy rain during the months of November, 2009 and December, 2009 and the rainfall during this period was much more higher than the average rainfall causing flooding of the project area. Moreover, dewatering of the flooded area added to the sufferings of the petitioner thereby causing delay. Also the unpredictable soil characteristics and heavy rain during this period was beyond the control of the petitioner and hence, the delay on this count cannot be attributable to the petitioner. In view of this, we are inclined to condone the delay of 10 months in case of Unit-I and 6 months in case of Unit-II in start of boiler erection work.

### **Delay due to heavy wind & dust storm in Drum Lifting**

19. The petitioner has submitted that there has been delay of 15 months for Unit-I and 10 months for Unit-II in the completion of the Drum lifting work of the generating station. In justification of the same, the petitioner has submitted that Ceiling Girder alignment issue got affected due to heavy winds and dust storms during the months of June, July and August, 2011 and works at higher elevations was at slow pace due to dust storm. It has also submitted that heavy winds during the months of June, July



and August every year in Tuticorin area is a continuous phenomenon. In our considered view, the petitioner at the time of seeking investment approval of the project may have proposed schedule of commissioning of units/station keeping in view the climatic conditions of the site. Moreover the petitioner has not furnished any documentary evidence such as report, newspaper cuttings and video clippings of the site which is stated to have been affected by heavy wind. Also, since the completion of Boiler erection work is October, 2010 for Unit-I and December, 2010 for Unit-II, the drum lifting should have been done within 5 to 6 months as per timeline envisaged in original schedule, which could have then avoided the impact of wind and dust storms during the months of June, July and August. In this background, the delay of 15 months for Unit-I and 10 months for Unit-II in completion of the Drum lifting work has not been condoned.

### **Consequential delay in Hydro test**

20. The petitioner has submitted that there has been delay of 16 months (from April, 2011 to September, 2012) for Unit-I and delay of 13 months (from September, 2011 to November, 2012) for Unit-II towards the completion of the Hydro test. In justification of the same, the petitioner has submitted that the delay is consequential upon the delay in achieving the previous milestones. It is noticed from the table under para 17 above that due to the consequential delays of the various milestones, the Hydro test was completed in September, 2012 for Unit-I and in November, 2012 for Unit-II. The petitioner has also submitted that there has been heavy scarcity of water during the months of April, May and June 2012-13 had affected the various construction activities. From the submissions of the petitioner, it is clear that the project area is at an average elevation of 2.40m above mean sea level and due to proximity to the sea, the ground water table in the project area is about 1m below the finished ground level. In our view, the petitioner could have arranged water from any of the alternative sources for conducting the hydro test. Moreover, the petitioner has not furnished any documentary proof justifying its claim for shortage of water in the locality. Accordingly, the submission of the petitioner is not acceptable and the delay in commissioning of the project on account of delay in hydro test is not condoned.



## **Delay due to Forest clearance in the Boiler Lighting up**

21. The petitioner has submitted that there has been total delay of 28 months from scheduled completion date of October, 2011 to actual completion date of March,2014 for Unit-I and 29 months from March 2012 to September 2014 for Unit-II up to boiler lighting up. The petitioner has attributed the said delay due to delays in obtaining statutory forest clearance and previous milestones activities i.e. ban on river sand mining by Govt. of Tamilnadu in April, 2011, Dust storms during the months of June, July and August every year and Heavy rain during the months of November and December every year vide affidavit dated 4.11.2016. The same is examined hereunder.

### **A. Delay due to Forest Clearance**

(i) The petitioner has submitted that MOU was signed on 28.10.2005 between Tuticorin Port Trust (now VOCPT) and NLC and subsequently a lease deed agreement was signed on 2.5.2011 for the total area of 127.465 hectare of land (102.465 Ha for Plant and 25 Ha for residential colony). It has also submitted that out of the 102.465 hectares of land for Plant, 59 hectares of land was notified as reserved forest under Section 16 of Madras Forest Act vide gazette notification dated 3.11.1923. The petitioner vide affidavit dated 2.9.2016 has further submitted that the issue of forest clearance cropped up after MCL vide Letter of Assurance (LOA) dated 24.9.2010 had agreed to sign the FSA with the petitioner after fulfilling certain requirements and forest clearance was one of the requirements. The petitioner has further submitted that it had followed this issue with VOCPT and the Govt. of Tamil Nadu at various levels for securing the forest clearance. On scrutiny, we find that there is no detail of the communication made by the petitioner to VOCPT prior to 7.5.2012 on which date the first correspondences has been made. It is noticed that subsequently, the petitioner vide letters dated 2.7.2012, 3.8.2012, 17.5.2013, 30.5.2013, 11.9.2013, 1.9.2014, 11.9.2014, 12.11.2014 and 29.12.2014 had communicated to different authorities i.e VOCPT, Govt. of Tamil Nadu, Ministry of Power, GOI, Ministry of Environment & Forests, GOI and the Ministry of Coal, GOI as regards to forest and wildlife clearance. However, from the letter dated 7.5.2012, it is noticed that reclassification of land was discussed in the review meeting held by the Chief Secretary of the Govt. of Tamil Nadu on 28.1.2012 and accordingly VOCPT has taken up the issue with Principal





Chief Conservation of Forests vide letter dated 7.3.2012. It is further observed that though the petitioner has mentioned that out of 102.465 hectares only 59 hectares was notified as forest land, the petitioner has not specified the systems/ equipments which were to be installed/erected in the forest land for which Forest Clearance was required. Further, the petitioner has also not furnished the list of the activities which were held up for the want of forest clearance. Moreover, the reserved forest land was de-reserved vide Govt of Tamil Nadu G.O. (MS) No.66 dated 2.6.2015 and accordingly GoTN gazette notification was issued on 24.6.2015. From the table of activity referred above, it is noticed that the petitioner was carrying out all the activities even prior to the notification of de-reserving the forest land. Moreover, the lighting up of Units-I and II of the generating station was completed by the petitioner during March, 2014 and September, 2014 respectively which is prior to the forest clearance notification dated 2.6.2015 obtained by the petitioner. Thus, the petitioner has failed to explain as to how and in what way the forest clearance had hampered the commissioning activities of the project. It is therefore clear that the work of the project was not held up at any stage for the want of forest clearance. In this background, the delay of 12 months for Unit-I and 16 months for Unit-II in the lighting up of boiler has not been condoned.

(ii) In addition to forest clearance, the petitioner has attributed time overrun due to delay in previous milestones activities like ban on sand supply by Govt. of Tamil Nadu during the months of May, 2011 and June, 2011, Dust storms during June, July and August of project years and heavy rains during the months of November and December. The delay due to heavy rains and heavy winds had already been considered as above in the civil works for boiler erection. However, the ban on quarrying of river sand by the State Govt of Tamil Nadu was a measure to check illegal mining and to regularize the supply of river sand. Moreover, the period of delay affected by the ban on sand supply was in April, 2011 and the lighting up of Units-I and II was scheduled during the months of October, 2011 and March, 2012 respectively and the actual completion of lighting up of the said units were carried out in the months of March, 2014 and September, 2014. In this background, the time overrun account of delay in previous milestones such as ban on sand supply, heavy rains and dust storms has not been condoned.





## **B. Delay due to Wildlife clearance in the Synchronization**

(i) The petitioner has submitted that there is total delay of 37 months in Unit-I and 33 months in Unit-II up to the Synchronization of respective units and accordingly the delay corresponding to the activity of synchronization is 9 months for Unit-I and 4 months for Unit-II. In justification of the same, the petitioner has submitted that the Tamil Nadu Pollution Control Board (TNPCB) vide letter dated 10.9.2014 had requested to start the operations of the plant only after obtaining clearance under Wildlife Protection Act and thereafter wildlife clearance was obtained in May, 2015. It is observed that despite the directions of TNPCB in letter dated 10.9.2014 that the construction of the Power plant without clearance is in violation of the provisions of the Environment Protection Act, 1986, the petitioner was still carrying out the commissioning activities. It is further observed that the synchronization of Units-I and II of the generating station was carried out during the months of February, 2015 and April, 2015 respectively, even prior to the Wildlife clearance obtained on 14.5.2015. Thus, no delay has been caused in the synchronization of the units for want of wildlife clearance. It is however noticed that the work of the project was hampered for 20 days during the months of November, 2014 and December, 2014 on account of flooding of the project area and accordingly, the delay of 20 days delay in the synchronization of the units has only been condoned.

22. Apart from the above, the petitioner has attributed time overrun of the project due to delay for other reasons namely, 1 month delay in all the packages due to ban on sand supply and 7 days delay due to fatal accidents. As stated above, the delay due to ban on sand quarrying in relation to the delay in Boiler light up had been examined and is not found justifiable. Hence, the delay of 1 month due to ban on sand supply in Boiler lightup has not been condoned. Also, the delay of 7 days due to fatal accident and labour unrest is allowed as the same is not attributable to the petitioner. Based on the above discussions, the total delay of 27 days (20 days due to flooding of project area and 7 days due to fatal accident and labour unrest) is condoned for each unit.



23. Further, the petitioner has attributed time overrun of the project on account of the delay in obtaining Wildlife clearance and CRZ clearance. As stated, the CRZ clearance was accorded to the petitioner on 11.4.2014, the Wildlife clearance on 14.5.2015 and the Forest clearance on 2.6.2015. Accordingly, the delay on account of CRZ clearance and Wildlife clearance has already been subsumed in the delay due to Forest clearance. From the submissions of the petitioner, it is observed that the petitioner has been carrying out the work of the project continuously irrespective of any of the said environmental clearances. It has also failed to clarify the details of the activities/milestones which were really impacted/hindered due to want of the said environmental clearances. The only hindrance due to the absence of environmental clearance, in our view was the Fuel Supply Agreement with MCL and the declaration of COD as no other activities of the project was affected by it. However, due to delay in statutory environmental clearance, the petitioner was able to declare the COD of the units only after 4 months from its synchronisation. In the above circumstances, we are of the considered view, that the delay of 4 months each for Unit-I and Unit-II from synchronisation till the COD of the units has been condoned.

24. In the background of the above discussions and in light of the decision of the Tribunal in judgment dated 27.4.2011, we conclude that the total delay of 15 months for Unit-I and 11 months for Unit-II which includes the delay in the civil works for boiler erection due to geographical surprises, declaration of COD, rain and fatal accident is beyond the control of the petitioner and the petitioner cannot be made responsible for the same. Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation 7.4(ii))], the total delay of 15 months for Unit-I and 11 months for Unit-II is condoned and the generating company is given the benefit of the additional cost incurred due to time overrun. However, the LD recovered from the contractor and the insurance proceeds, if any, would be considered for reduction of capital cost.

25. The balance delay of 24.23 months for Unit-I and 25.60 months for Unit-II are in respect of factors namely, delay in providing inputs like making land available to the contractors is due to slackness on the part of the petitioner in project management and is within the control of the petitioner. Since these



are controllable factors in terms of Regulation 12(1) of the 2014 Tariff Regulations, the delay is attributable to the petitioner. Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation 7.4(i)], the delay of 24.23 months for Unit-I and 25.60 months for Unit-II cannot be said to be beyond the control of petitioner and hence not condoned. Therefore, the increase in cost on account of the said delay has to be borne by the petitioner. However, the Liquidated Damages (LD) and Insurance proceeds if any, received by the generating company, on account of the said delay, could be retained by the generating company

26. Based on the above discussions, the time overrun allowed (against the actual time overrun) for Unit-I and Unit-II and the schedule COD (reset) for the purpose of computation IDC is summarized as under:

Units	Schedule COD as per Investment Approval	Actual COD	Time Overrun considering SCOD (months)	Time overrun allowed ( in months)	SCOD (reset) for IDC computation
I	11.3.2012	18.6.2015	39.23	15	11.6.2013
II	11.8.2012	29.8.2015	36.60	11	11.7.2013

## Capital Cost

27. Regulation 9 (2) of the 2014 Tariff Regulations provides as under:

*“The Capital cost of a new project shall include the following:*

*(a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*

*(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*

*(c) Increase in cost in contract packages as approved by the Commission;*

*(d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;*

*(e) Capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;*

*(f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;*

*(g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and*

*(h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.*



## Approved Capital Cost

28. The original sanctioned cost of the project is ₹4909.54 crore at April 2007 price level including IDC of ₹597.33 crore and foreign exchange component of ₹716.06 crore equivalent of US \$ 169.884 Million at 1 US \$ = ₹42.16. As per Gol guidelines on "Mandatory Review and Revised Cost Estimate (RCE)", mandatory review of the project cost estimates has to be carried out with a view to make sure whether project cost estimate would require upward revision at the stage when funds to the extent of 50% of the approved cost are released. Accordingly, RCE-I was submitted and approved by Govt. of India on 9.12.2013. Further, on account of time & cost overrun after taking into account the relevant guidelines issued by GOI, RCE-II was submitted and approved by the Board of Directors of the Petitioner Company in the 419<sup>th</sup> Board Meeting held on 9.4.2012. However, the Board of Directors of the Petitioner Company had approved RCE-II considering the increase in project cost and the same was approved by the Govt. of India on 27.4.2016. The petitioner has claimed tariff based on RCE-II amounting to ₹7293.48 crore as on June, 2015 price level, including IDC of ₹1379.15 crore and Foreign Exchange component of ₹93.11 crore equivalent to US \$ 18.10 million. Accordingly, the approved project cost as per original investment approval, RCE-I and RCE-II is as under:

<i>(₹ in crore)</i>		
Sanctioned cost as per original approval dated 12.5.2008	As per RCE-I dated 9.12.2013	As per RCE-II dated 27.4.2016
4909.54	6602.74	7293.48

29. The RCE-II approved by the Board of Directors of the Petitioner Company is ₹7293.48 crore which is ₹2383.94 crore higher than original approved cost of ₹4909.54 crore. Hence, there is increase of 48.56% in the approved cost as per RCE-II from the Original investment approval cost. This increase is due to increase in IDC, Construction & Pre-commissioning activities etc.

## Actual Capital Cost as on COD

30. The capital cost considered by the petitioner for the purpose of determination of tariff in Form(1)(i) of the affidavit dated 29.3.2016 is as under:



(₹ in lakh)

	2015-16 (Unit-I)	2015-16 (station)	2016-17	2017-18	2018-19
Capital cost claimed	367184.91	734023.16	668560.63	717742.62	732735.62
Less : IDC Included	68957.50	137915.00	-	-	-
Less : Liabilities included	53465.71	106931.42	-	-	-
Add : IDC claimed	66768.35	137915.00	-	-	-
Add : Notional IDC claimed	1693.62	3387.23	-	-	-
Less : Adjustment of sale of Infirm Power (certified by SRPC provisional)	2510.72	4674.77	-	-	-
<b>Capital Cost allowed</b>	<b>310712.95</b>	<b>625804.20</b>	<b>668560.63</b>	<b>717742.62</b>	<b>732735.62</b>
Less : Land value	-	-	-	-	-
Gross Asset value - Additions (Works) (A)	-	42756.43	49182.00	14993.00	-
Deletion of Asset -(B)	-	-	-	-	-
Cum. Depreciation of asset deleted (C)	-	-	-	-	-
Net Assets capital additions [A- (B-C)]	-	42756.43	49182.00	14993.00	-
<b>Closing capital cost</b>	<b>310712.95</b>	<b>668560.63</b>	<b>717742.62</b>	<b>732735.62</b>	<b>732735.62</b>

31. However, in Form-5B of the affidavits dated 29.3.2016 and 4.11.2016, the capital cost, on cash basis, as on COD of Units-I and II claimed by the petitioner is as under:

	(₹ in lakh)	
	2015-16 (Unit I)	2015-16 (station)
Capital Cost including IDC	307501.49	622416.97
Less: IDC	66768.35	137915.00
Capital Cost excluding IDC	240733.14	484501.97

32. The difference between the claim of the petitioner in Form-5B and Form 5(1)(i) is on account of the fact that the capital cost claimed in Form 5(1)(i) includes notional IDC along with actual IDC. Accordingly, the capital cost, on cash basis, as furnished in Form-5B has been considered for the purpose of tariff.

### Impact of time overrun on contract price, IDC and IEDC etc

33. Due to time overrun in the COD of Units-I & II, there is requirement for *pro rata* reduction in the contract price, IDC & IEDC. It is noticed in Form-5D and Form-5B submitted by the petitioner vide affidavits dated 29.3.2016 and 4.11.2016 that there is no increase in the Main plant package cost, Civil works etc. as on the actual COD and up to 31.3.2018 along with provisions as compared to the award value. Therefore, there is no price escalation on account of time overrun. The total actual expenditure on overheads as on COD of the generating station (29.8.2015) is ₹19027.55 lakh (₹9123.93 lakh as on



COD of Unit-I (18.6.2015) and ₹9903.62 lakh as on COD of Unit-II) and the expenditure towards Establishment charges is ₹16604.59 lakh (₹7919.92 lakh as on COD of Unit-I (18.6.2015) and ₹8684.67 lakh as on COD of Unit-II). Due to time overrun, there is increase in establishment charges and the pro-rata deduction in establishment charges is worked out as under:

(₹ in lakh)				
	Total period taken from zero date to actual COD (Months)	Time overrun disallowed (Months)	Overhead (Establishment) Expenses under IEDC	Pro-rata reduction =(col.4xcol.3) / col.2
Unit-I	85.20	24.23	7919.92	2252.34
Unit-II/ generating station	87.56	25.60	8684.67	2539.14

### Initial Spares

34. Regulation 13 of the 2014 Tariff Regulations provides as under:

*“13. Initial Spares: Initial spares shall be capitalised as a percentage of the Plant and Machinery cost upto cut-off date, subject to following ceiling norms:*

*(a) Coal-based/lignite-fired thermal generating stations - 4.0%*

*(b) Gas Turbine/Combined Cycle thermal generating stations - 4.0%*

*Provided that:*

*i. where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Commission, such norms shall apply to the exclusion of the norms specified above:*

*iv. for the purpose of computing of initial the cost spares, plant and machinery cost shall be considered as project cost as on cut-off date excluding IDC, IEDC, Land Cost and cost of civil works. The transmission licensee shall submit the break-up of head wise IDC & IEDC in its tariff application.”*

35. The COD of the Unit-II/ generating station is 29.8.2015 and accordingly, the cut-off date of the generating station is 31.3.2018. The total initial spares claimed by the petitioner upto the cut-off date of the generating station is ₹15065.64 lakh (₹9414.43 lakh as on COD + liability provision of ₹5651.21 lakh during the years 2016-17 and 2017-18). The total Plant and Machinery cost of the project including taxes and duties and transport as per Form-5B of the petition is ₹290385.34 lakh as on COD of the generating station and ₹336070.29 lakh as on cut off date (i.e. 31.3.2018). Further, the petitioner has capitalized initial spares amounting to ₹9414.43 lakh as on COD of the generating station. The initial spares of ₹9414.43 lakh capitalized works out to 3.24% of the Plant and Equipment cost up to COD and the same is within the ceiling limit of 4% specified under the said Regulations. Hence, the amount of initial spares claimed is allowed. The petitioner is however directed to furnish the details of initial spares



capitalized from COD upto the cut-off date of the generating station at the time of true-up of tariff in terms of the Regulation 8 of the 2014 Tariff Regulations.

### Infirm power

36. The petitioner vide ROP of the hearing dated 2.8.2016 was directed to submit the details of infirm power injected in the grid by Units-I and II separately, till its COD along with the revenue earned from sale of infirm power, excluding fuel cost, and the details of fuel used from synchronization till COD along with expenditure on fuel for pre-commissioning activities. In response, the petitioner vide affidavit dated 2.9.2016 has submitted the details of infirm power injected in the grid by Units-I & II separately from synchronization to COD's of Units, revenue earned from sale of infirm power excluding fuel cost and the detail of fuel used from synchronization to COD for pre-commissioning activities as summarized under:

	Unit	Unit-I	Unit-II	Total
Consumption of coal	MT	149220	94785	244005.00
Landed cost of coal	₹/MT	3009.430	3553.76	
Fuel Cost (Coal)	₹	449067144.60	337162980.00	786230124.60
Consumption of oil (HFO)	KL	4190	5633	9823
Consumption of oil (LDO)	KL	1025	546	1571
Landed cost of HFO	₹/KL	34086.67	32792.58	
Landed cost of LDO	₹/KL	58946.66	57462.57	
Fuel cost (oil)	₹	203229157.40	216098816.93	419327974.33
Revenue from infirm power excluding fuel cost	₹	(-)365324983.88	(-)372756154.05	(-)738081137.93
Infirm power injected into the grid	MU	202.6127	126.6674	329.2801
<b>Revenue earned from sale of Infirm Power</b>	₹	<b>286971318.12</b>	<b>180505642.88</b>	<b>467476961.00</b>

37. It is observed from the above that the revenue from sale of infirm power, excluding fuel cost, from Units-I and II of the project till the COD of the generating station is (-)₹738081137.93. It is further observed that the revenue earned from sale of infirm power amounting to ₹4674.77 lakh has been adjusted in the capital cost. However, from the details of fuel cost, it is noticed that the total cash expenditure on fuel cost (coal+oil) is ₹12055.58 lakh, and whereas, the fuel cost as indicated in Form-5B is ₹19918.47 lakh. The petitioner has however not furnished any explanation/justification for the said discrepancy in the fuel cost. In the absence of any explanation/clarification, we have in this order, considered the fuel cost of ₹12055.58 lakh instead of ₹19918.47 lakh. Accordingly, the fuel cost has been adjusted by (-)₹7862.89 lakh (19918.47-12055.58).



## Liquidated Damages

38. The petitioner has submitted that the LD amount of ₹27126.00 lakh has been recovered from different contractors on account of the delay in the execution of the project. Since the LD amount is to be shared between the petitioner and the beneficiaries on account of time overrun allowed, the LD adjustment is worked out as under:

Total time overrun	Time overrun Allowed (months)	Time overrun disallowed (months)	Amount of total LD recovered	Pro-rata reduction =(col.5xcol.3)/ col.2
36.60	11	25.60	27126.00	8152.62

39. Based on the above discussions, the capital cost considered after adjusting the cost of establishment, LD recovered etc., as furnished in Form-5B by the petitioner, the capital cost of Unit-I and Unit-II/station works out as under:

Sl. No		2015-16	
		Unit-I (as on COD 18.6.2015)	Unit-II (as on COD 29.8.2015)
1.	Capital cost including IDC	307501.49	622416.97 (including capital cost of 307501.49 for Unit-I)
2.	IDC	66768.35	137915.00 (including ₹71146.65 for Unit-II)
3.	Capital Cost excluding IDC (1-2)	240733.14	484501.97
4.	Less: Pro-rata reduction on overhead expenses IEDC	2252.34	4791.48 (2252.34 for Unit-I & 2539.14 for Unit-II)
5.	Less: Adjustment of LD recovered	0.00	8152.62
6.	Less: Pro-rata reduction of excess fuel cost	3850.92	7862.89 (3850.92 for Unit-I & 4011.97 for Unit-II)
6.	Total Opening capital cost for purpose of tariff excluding, IDC, IEDC and adjustment of LD (3-4-5)	234629.88	463694.98

40. As against the above cash expenditure in Form 5B, the position based on the balance sheet of the generating station as on COD of both the units are as under:

		As on COD of Unit-I	As on COD of station
A	Gross Block	335786.69	675263.38
B	CWIP	349319.21	17495.47
C	Un-discharged liabilities	48448.42	48029.37
D	<b>Cash Expenditure (A+B-C)</b>	<b>636657.48</b>	<b>644729.47</b>





41. In the balance sheet as on the COD of Unit-I (18.6.2015), a sum of Rs 180170.35 lakh has been shown under 'Revenue expenditure' transferred to CWIP. In the absence of head-wise details of this expenditure, Establishment, Audit and Accounts as per Form 5B has been considered under IEDC. The petitioner is directed to submit the details of such expenditure as shown in the balance sheet, with head-wise details at the time of truing-up of tariff in terms of Regulation 8 of the 2014 Tariff Regulations.

42. It is pertinent to mention that as against un-discharged liabilities as per balance sheet, the petitioner in Form 5B has indicated an amount of ₹106931.42 lakh as un-discharged liabilities and provisions, which is actually the difference between the RCE-II approved cost of ₹729348.39 lakh and the actual cash expenditure of ₹622416.97 lakh as on COD of the generating station (29.8.2015). The petitioner has claimed discharge of the said liabilities/provisions during the period from 2015-16 to 2017-18. These discharges have not been considered for the purpose of tariff and the same will be considered at the time of truing up of tariff. The funding for the project as per the balance sheet is as under:

		(₹ in lakh)	
		As on COD of Unit-I	As on COD of Station
E	Share Capital	182940.00	182940.00
F	Share Application Money	5500.00	1461.60
G	Long Term Borrowing	432482.00	457497.00
H	Total fund raised (E+F+G)	<b>620922.00</b>	<b>641898.60</b>

### Funding Gap

43. It is observed that there is a funding gap as on the Cod of the units, between the cash expenditure and the project funding as above, and the same is as under:

		(₹ in lakh)	
		As on COD of Unit-I	As on COD of Station
D	Cash Expenditure	636657.48	644729.47
H	Total fund raised	620922.00	641898.60
	Funding Gap (D-H)	15735.48	2830.87

44. No explanation has been furnished by the petitioner as regards the funding gap of ₹15735.48 lakh for Unit-I and ₹2830.87 lakh for Unit-II of the generating station. Accordingly, the gap in funding for Units-I and II have been considered as un-discharged liabilities and has been deducted from the capital cost allowed for the purpose of tariff as on the respective COD of the units of the generating station, in line



with the Commission's order dated 18.4.2017 in Review Petition No.28/RP/2016in Petition No. 198/GT/2013.As per balance sheet,an amount of ₹4.12 lakh for Unit-I and ₹2293.08 lakh and Unit-II has been shown under Reserve and Surplus as negative entries. However, for the purpose of calculation of debt equity ratio, the above negative entries (accumulated loss) have not been considered, keeping the perpetuity factor in view, while determining the equity capital as on COD of Units-I and II.

### **IDC and Normative IDC**

45. As stated above, the schedule COD of the units have been shifted on account of time overrun in the declaration of commercial operation of the units. The petitioner has claimed normative IDC for the period from June, 2006 to February, 2009 by considering the rate of interest @ 11.10% p.a. applicable to the first drawl of loan. But, there was no actual loan for the generating station as well as the Petitioner Company as a whole prior to 31.3.2009. Hence, there is no weighted average rate of interest available in order to work out the Normative IDC prior to the actual drawl of the loan (31.3.2009). Therefore, no normative IDC has been allowed prior to the actual drawl of the loan. Similar view had been taken by the Commission in order dated 8.2.2016 in Petition No. 198/GT/2013 and the relevant portion of the said order is extracted as under:

*"51. The petitioner has claimed the notional IDC for the period from 2003-04 to 2007-08 by considering the rate of interest @ 10.75% p.a. applicable to the first drawl of loan. But, there was no actual loan for the station as well as the petitioner company as a whole before 26.6.2008. Hence, there was no weighted average rate of interest available to work out the notional IDC before the actual drawl of the loan (26.6.2008). Therefore, no IDC has been allowed before the actual drawl of the loan.*

*52. Further, Notional IDC has also been allowed up to the date of scheduled COD only. The apportionment of Notional IDC has been made as per apportionment of IDC. Accordingly, the total notional IDC of ₹1533.54 lakh has been allowed in the capital cost for the purpose of tariff."*

46. In line with the above, IDC and normative IDC allowed up to the date of scheduled COD is as under:

	<i>(₹ in lakh)</i>		
	<b>Unit-I</b>	<b>Unit-II</b>	<b>Total</b>
IDC allowed	25810.19	27147.95	<b>52958.13</b>
Normative IDC allowed	1415.24	1431.56	<b>2846.80</b>

47. Interest on normative loan is treated as income in the Financial Statement i.e. Profit & Loss A/c and Balance sheet by the petitioner as it form part of capital cost for the purpose of allowing tariff.



## Additional Capital Expenditure

48. Regulations 14 (1) of the 2014 Tariff Regulations, provides as under:

*“14.(1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*

*(i) Un-discharged liabilities recognized to be payable at a future date;*

*(ii) Works deferred for execution;*

*(iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;*

*(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and*

*(v) Change in law or compliance of any existing law:*

*Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff*

49. The petitioner vide ROP of the hearing dated 29.9.2016 was directed to furnish the details of additional capital expenditure from COD of the generating station till 31.3.2019. In response, the petitioner vide affidavit dated 4.11.2016 has submitted the details of additional capital expenditure for the period 2016-18 as under:-

	(₹ in lakh)	
	2016-17	2017-18
Additional compressor 3 nos.	65.00	200.00
Mini JCB/ Robot	20.00	30.00
Construction of additional Silos civil works	50.00	450.00
Mercury analyser 2 nos.	0.00	43.20
Generator rotor	0.00	500.00
Exciter	0.00	1500.00
SF6 gas analyser	0.00	25.00
CEMS (Continuous emission monitoring system)	43.50	72.00
PPM Meter	0.00	5.00
H2 Leak detector	0.00	5.00
Special dust control equipment	100.00	100.00
Additional makeup line and one more set of makeup and outfall pump	0.00	2500.00
<b>Total additional capital expenditure</b>	<b>278.50</b>	<b>5430.00</b>

50. The petitioner was directed to furnish detailed justification of the additional capital expenditure along with relevant clauses of Regulation 14 of the 2014 Tariff Regulations under which the claims have been made. However, the petitioner has not furnished the said information. It is observed that the petitioner has claimed total additional capital expenditure of ₹278.50 lakh in 2016-17 towards Additional compressor (3 nos), Mini JCB/ Robot, Construction of additional Silos civil works, CEMS Continuous



Emission Monitoring System (CEMS) and Special dust control equipment. It has also claimed total expenditure of ₹5430.00 lakh in 2017-18 towards Additional compressor (3 nos), Mini JCB/ Robot, Construction of additional Silos civil works, Mercury analyser(2 nos), Generator rotor, Exciter, SF6 gas analyser, CEMS, PPM Meter, H2 Leak detector, Special dust control equipment and additional makeup line and one more set of makeup and outfall pump without any proper justification. The petitioner has also not submitted as to whether the assets like Generator Rotor, LP/HP rotor etc are in the nature of spares or whether these assets are required to replace the existing rotors due to breakdown. The cut-off date of the generating station is 31.3.2018. Thus, the claim of the petitioner which are in the nature of tools and tackles, minor assets and capital addition is allowed for the period 2016-18 considering the fact that the assets claimed are within the cut-off date of the generating station. The petitioner is however directed to submit detailed justification along with relevant clauses/ documentary evidence in respect of the claim for additional capitalization at the time of truing up of tariff in terms of Regulation 8 of the 2014 Tariff Regulations and the same may get revised in accordance with law.

### Reasonableness of Capital Cost

51. The comparison of the capital cost with the bench mark capital cost is discussed as under:

		<i>(₹ in lakh)</i>
A	Hard Cost up to COD (29.8.2015)	463694.98
B	Cost per MW up to COD (29.8.2015)	4.64 Cr/MW
C	Total Capital expenditure allowed up to cut off date	5708.5
D	Excess initial Spares during 2016-18	1622.83
D	Total hard cost up to cut off date (31.3.2018) (A+C-D)	467780.65
<b>E</b>	<b>Cost per MW up to cut-off date (i.e. 31.03.2018)</b>	<b>4.68 Cr/MW</b>

52. The benchmark hard cost as specified by the Commission in Order dated 4.6.2012 for thermal power stations with coal as fuel at December, 2011 Price level with 2 units of 500MW each is ₹4.71 cr/MW. The hard cost of the generating station as on COD (29.8.2015) and as on cut-off date (31.3.2018) is ₹463694.98 lakh (₹4.64 cr/MW) and ₹467780.65 lakh (₹4.68 cr/MW) respectively. The hard cost as on cut-off date of the generating station including the projected additional capitalisation is ₹4.68 cr/MW and the same is lower than the benchmark hard cost. Although, the generating station has special features viz (a) Desalination plant (b) Shore un-loader and (c) Offshore conveyor, the hard cost is lower than benchmark hard cost. It is therefore evident that the hard cost of the generating station



(Unit- I & Unit-II) up to cut-off date (31.3.2018) is reasonable. However, the actual hard cost up to the cut-off date can only be worked out/assessed after the end of the tariff period when capitalization of expenditure would be on actuals.

## Capital Cost

53. Based on the above, the capital cost approved in respect of the generating station for the period 2014-19 is as under:

	2015-16		2016-17	2017-18	2018-19
	18.6.2015 to 28.8.2015 (Unit-I)	29.8.2015 to 31.3.2016 (Units I & II)			
Opening Capital cost excluding IDC and Normative IDC	234629.88	463694.98	-	-	-
IDC allowed	25810.19	52958.13	-	-	-
Normative IDC allowed	1415.24	2846.80	-	-	-
Less: unexplained funding gap	15735.48	2830.88	-	-	-
Opening Capital Cost	246119.82	516669.04	516669.04	516947.54	522377.54
Additional capital expenditure allowed	0.00	0.00	278.50	5430.00	0.00
<b>Capital Cost as on 31<sup>st</sup> March of the year</b>	<b>246119.82</b>	<b>516669.04</b>	<b>516947.54</b>	<b>522377.54</b>	<b>522377.54</b>

## Debt Equity Ratio

54. Regulation 19 of the 2014 Tariff Regulations provides as under:

*“19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*

*Provided that:*

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.*

**Explanation.-***The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.*

*(2) The generating company or the transmission licensee shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.*



(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.

55. The debt and equity position as per the balance sheet as on both the CODs is as under:

	<i>(Rs in lakh)</i>	
	<b>18.6.2015</b>	<b>29.8.2015</b>
Share Capital	182940.00	182940.00
Share Application Money	5500.00	1461.60
Long Term Borrowing	432482.00	457497.00
Capital expenditure (after deducting the funding gap)	620922.00	641898.60

56. It is observed that there is share application money amounting to `5500.00 lakh and `1461.60 lakh respectively pending for allotment. Though, the same has been utilized toward expenditure of project, the same was not converted into share capital as on COD. As such, the same cannot be treated as part of equity and has been considered as debt for the calculation of debt equity ratio for the purpose of tariff. Accordingly, the debt-equity ratio is worked out as under:

	<i>(Rs in lakh)</i>	
	<b>18.6.2015</b>	<b>29.8.2015</b>
Equity (Share capital)	182940.00	182940.00
Share application money (i)	5500.00	1461.60
Long Term Borrowing (ii)	432482.00	457497.00
Debt (i+ii)	437982.00	458958.60
Debt%	70.54%	71.50%
Equity%	29.46%	28.50%

## Return on Equity

57. Regulation 24 of the 2014 Tariff Regulations provides as under:

*“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.*

*(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:*



Provided that:

i). in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:

ii). the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:

iii). additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

iv). the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:

v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues: vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.

58. Regulation 25 of the 2014 Tariff Regulations provides as under:

*Tax on Return on Equity:*

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non generation or non transmission business, as the case may be) shall not be considered for the calculation of "effective tax rate".

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2014-15 to 2018-19 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/DICs as the case may be on year to year basis.





59. It is observed from the annual reports of the Petitioner Company that no tax has been paid for the year 2015-16. As such, the Return on Equity has not been allowed to be grossed up with the MAT rate though claimed by the petitioner. Accordingly, Return on Equity has been computed as under:

	2015-16		2016-17	2017-18	2018-19
	18.6.2015 to 28.8.2015 (Unit-I)	29.8.2015 to 31.3.2016 (Units I & II)			
Gross Normative Equity	72513.39	147249.79	147249.79	147333.34	148962.34
Addition due to Additional Capitalization	0.00	0.00	83.55	1629.00	0.00
Closing Equity	72513.39	147249.79	147333.34	148962.34	148962.34
Average Equity	72513.39	147249.79	147291.56	148147.84	148962.34
Return on Equity (Base Rate )	15.500%	15.500%	15.500%	15.500%	15.500%
Tax rate for the year	0.000%	0.000%	0.000%	0.000%	0.000%
Rate of Return on Equity (Pre Tax )	15.500%	15.500%	15.500%	15.500%	15.500%
<b>Return on Equity (Pre Tax)</b>	<b>2211.06</b>	<b>13469.73</b>	<b>22830.19</b>	<b>22962.92</b>	<b>23089.16</b>

(₹ in lakh)

### Interest on loan

60. Regulation 26 of the 2014 Tariff Regulations provides as under:

*“26. Interest on loan capital: (1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*

*(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*

*(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of Decapitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered up to the date of de-capitalization of such asset.*

*(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*

*(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*

*Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:*

*Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*

*(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*

*(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs*





associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.

61. Interest on loan has been worked out as mentioned below:

(a) The weighted average rate of interest has been worked out on the basis of the actual loan portfolio of respective year applicable to the project;

(b) Depreciation allowed for the period has been considered as repayment;

(c) The interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest calculated.

62. Necessary calculations for interest on loan are as under:

	2015-16		2016-17	2017-18	2018-19
	18.6.2015 to 28.8.2015 (Unit-I)	29.8.2015 to 31.3.2016 (Units I & II)			
Gross Loan- opening	173606.43	369419.25	369419.25	369614.20	373415.20
Cumulative Repayments up to Previous Year	0.00	2530.76	18465.85	44693.87	71066.74
Net Loan-Opening	173606.43	366888.49	350953.40	324920.33	302348.46
Addition due to drawl	0.00	0.00	194.95	3801.00	0.00
Repayment	2530.76	15935.09	26228.02	26372.87	26510.66
Net Loan-Closing	171075.67	350953.40	324920.33	302348.46	275837.80
Average Loan	172341.05	358920.95	337936.87	313634.39	289093.13
Rate of Interest	9.986%	9.986%	9.986%	9.986%	9.986%
<b>Interest on loan</b>	<b>3385.50</b>	<b>21152.14</b>	<b>33745.70</b>	<b>31318.90</b>	<b>28868.26</b>

## Depreciation

63. Regulation 27 of the 2014 Tariff Regulations provides as under:

*“27. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.*



*Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.*

*(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.*

*(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:*

*Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:*

*Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:*

*Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.*

*(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.*

*(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system:*

*Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.*

*(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.*

*(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.*

*(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services."*

64. The weighted average rate of depreciation claimed as per regulation above is 5.227% for the period from 18.6.2015 to 28.8.2015 and 5.226% for the period from 29.8.2015 to 31.3.2016 and 5.075% for the period from 2016-17 to 2018-19 and the same has been considered. Necessary computations in support of depreciation are as under:



(₹ in lakh)

	2015-16		2016-17	2017-18	2018-19
	18.6.2015 to 28.8.2015 (Unit-I)	29.8.2015 to 31.3.2016 (Units I & II)			
Gross Block as on COD	246119.82	516669.04	516669.04	516947.54	522377.54
Additional capital expenditure during 2014-19	0.00	0.00	278.50	5430.00	0.00
Closing gross block	246119.82	516669.04	516947.54	522377.54	522377.54
Average gross block	246119.82	516669.04	516808.29	519662.54	522377.54
Rate of Depreciation	5.227%	5.226%	5.075%	5.075%	5.075%
Depreciable value	221507.84	465002.13	465127.46	467696.28	470139.78
Remaining depreciable value	221507.84	462471.38	446661.61	423002.42	399073.04
<b>Depreciation</b>	<b>2530.76</b>	<b>15935.09</b>	<b>26228.02</b>	<b>26372.87</b>	<b>26510.66</b>

### Operation & Maintenance expenses

65. Regulation 29 (1) (a) of the 2014 Tariff Regulations provides the year-wise O & M expense norms for coal based thermal generating units as under:

	(₹ in lakh/MW)				
	2014-15	2015-16	2016-17	2017-18	2018-19
O & M expenses Norms for 500 MW	16.0	17.01	18.08	19.22	20.43

66. In terms of the above regulations, the petitioner has claimed O&M expenses as under:

	2015-16		2016-17	2017-18	2018-19
	18.6.2015 to 28.8.2015 (Unit-I)	29.8.2015 to 31.3.2016 (Units I & II)			
	8505.00	17010.00	18080.00	19220.00	20430.00

67. The normative O&M claimed by the petitioner in terms of the 2014 Tariff regulations is in order and hence allowed.

### Additional O&M expenses for desalination plant

68. The petitioner has prayed for review of the normative O&M expenses and has submitted that total additional O&M expenses of `22.08 crore per annum would be required for treating sea water to soft water on account of the following additional features:

	(₹ in crore)
Desalination Plant –(chemical, filters, membrane)	8.00
Shore un-loader	5.25
Offshore Conveyor	5.77



69. In justification of the same, the petitioner has submitted that various chemicals are required for production of RO water and Filters and Membranes are required to be replaced periodically during RO production. It has submitted that the cost of chemicals for producing the RO water is expected to be ₹4.00 crore per year and the replacement cost of Filters and Membranes is expected to be ₹4.00 crore per year inclusive of Salaries and Wages of the manpower deployed. Accordingly, it has submitted that an additional cost of ₹8.00 crore per year, towards O&M cost on account of desalination plant is expected to be incurred. The petitioner has also submitted that an estimated 4.5 MT of Coal through 100 Shiploads per annum is going to be handled through this infrastructure. The petitioner has added that the annual additional expenses for O&M of Shore unloader is ₹5.25 crore & Offshore Conveyor system up to Plant is ₹5.77 crore. As regards Bottom ash disposal, the petitioner has submitted that it has to be transported to a distance of 27 to 35 KM from the project site and considering the daily requirement of 15360 Tons of coal with 34% Ash content, it is estimated that around 1000 tons of bottom ash has to be disposed with another 4000 tons through dry ash disposal system. The petitioner has stated that the contract for safe disposal of Bottom Ash to the distant location was awarded for 6 months at a value of ₹1.53 crore and the annual value works out to ₹3.06 crore.

70. The petitioner was directed vide ROP of the hearing dated 2.8.2016 to furnish the details of the actual O&M expenses of the generating station from COD to till date. In response, the petitioner vide affidavit dated 2.9.2016 has submitted that the total O&M expenses from COD (29.8.2015) to 31.7.2016 is ₹18989.75 lakh. The petitioner has also claimed expenses for consumables (i.e chemicals, filters, and membranes) to be used for the additional desalination plant. It is observed that the actual O&M expenditure incurred by the petitioner for the period 29.8.2015 to 31.7.2016 (approx 11 months) is ₹18989.75 lakh which is higher than the O&M expense norm of ₹17010 lakh applicable for the period 2015-16. However, the petitioner has commissioned similar desalination plant and has claimed additional O&M expenses of ₹4.70 crore in 2015-16.



71. The respondent, KSEBL has submitted that there is no provision in the 2014 Tariff Regulations to claim O&M expenses over and above the same allowed under Regulation 29. It has further submitted that the Commission had allowed normative O&M expenses considering the past actual performance of various plants and has also duly factored the inflation at the rate of 6.35% over and above the normative O&M expenses. The respondent has stated that any expenses incurred beyond the O&M norms specified in the regulation may be absorbed by the petitioner from the profit earned by them. Accordingly, it has prayed that the Commission may clarify that the O&M cost is not allowed over and above the rate specified under Regulation 29 of the 2014 Tariff Regulations.

72. The respondent, TANGEDCO has submitted that it is evident from the Statement of Reasons (para 29.39) annexed to the 2014 Tariff Regulations that the Commission had already taken into consideration the site specific issues while determining the norms for O&M expenses in respect of thermal generating stations. Accordingly, it has prayed that the prayer of the petitioner may be rejected.

73. The matter has been examined. It is observed that the plant is located near sea coast and thus there will be no water charges, as water will be made available from sea itself. In addition, the O&M expenses for RO desalination plant is allowed separately as normative O&M for meeting the water requirement of the plant. Considering the location of the plant, an amount of ₹22.08 crore per annum (which works out to ₹2.208 lakh/MW/year), claimed by the petitioner is too high in comparison to the amount of ₹468.84 lakh (which works out to ₹0.312 lakh/MW/year) for 2015-16 claimed by Vallur Thermal Power Project of NTECL which has 3 x 500 MW units as compared to 2 x 500 MW units of this generating station. In view of this, the Operation & Maintenance expenses claimed by the petitioner including consumables are restricted to an amount of ₹0.312 lakh/MW/year (₹312.56 lakh) at this stage. The O&M expenses for RO desalination plant allowed as above is subject to true-up of tariff and the petitioner is directed to place on record all relevant information/justification comparing the claim for chemicals filters & membranes etc. with respect to the Vallur Thermal Power Project of NTECL. The normative O & M expenses does not include additional features like desalination plant, chemicals, filters and membranes used for the same. Hence, expenses on desalination plant is allowed separately.



## Water charges

74. Regulation 29(2) of the 2014 Tariff Regulations provide as under:

*“29 (2) The Water Charges and capital spares for thermal generating stations shall be allowed separately:*

*Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details regarding the same shall be furnished along with the petition:*

*Provided that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization”*

75. As per Regulations 29(2) of the 2014 Tariff Regulations, water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. However, the petitioner has not claimed water charges on projection basis during the year 2015-19. Accordingly, the same has not been considered. The total O&M expenses including additional expenses for desalination plant and water charges allowed is as under:

	2015-16		2016-17	2017-18	2018-19
	18.6.2015 to 28.8.2015	29.8.2015 to 31.3.2016			
<b>O&amp;M Expenses allowed</b>	1673.11	10038.69	18080.00	19220.00	20430.00
Additional O&M expenses for desalination plant allowed	61.49	184.46	312.56	312.56	312.56
Water Charges allowed	0.00	0.00	0.00	0.00	0.00
<b>Total O&amp;M Expenses allowed</b>	<b>1734.60</b>	<b>10223.15</b>	<b>18392.56</b>	<b>19532.56</b>	<b>20742.56</b>

(₹ in lakh)

### Additional O&M due to CISF Security Force

76. The petitioner has submitted that the generating station is very near to the sea coast and hence, there is a risk of intrusion. It has also submitted that CISF is a premier multi-skilled security agency of the country, mandated to provide security to Industrial zone including this generating station and the deployment of the force would be completely at the cost of the petitioner. It has further submitted that the expenditure of ₹14.70 crore proposed to be incurred for providing certain infrastructure facilities such as residential accommodation to the force, vehicles etc. is included in the project cost & revenue expenditure and has not been included in the Operation & Maintenance expenses claimed. In our view,



the revenue expenditure due to deployment of security forces has been included in the normative O&M expenses under the 2014 Tariff Regulations and hence there is no reason to consider the claim of the petitioner. The petitioner shall meet such expenses from the normative O&M expenses admissible to the generating station. Accordingly, the claim of petitioner for revenue expenditure towards deployment of CISF security is not justified and is accordingly disallowed.

### Operational Norms

77. The operational norms in respect of the generating station considered by the petitioner are as under:

Maximum Design heat rate applicable	Kcal./Kwhr.	2255.17
Target Availability	%	85.00
Target Availability for recovery for fixed Cost	%	83.00
Auxiliary Energy Consumption	%	5.25
Gross Station Heat Rate	kCal/kWh	2351.25
Specific Fuel Oil Consumption	ml/kWh	0.50

### Normative Annual Plant Availability Factor

78. Regulation 36(A)(a) of the 2014 Tariff Regulations provides the target availability of the generating station as under:

#### (A) Normative Annual Plant Availability Factor (NAPAF)

*(a) All Thermal generating stations, except those covered under clauses (b) (c) (d) & (e)- 85%.*

*Provided that in view of the shortage of coal and uncertainty of assured coal supply on sustained basis experienced by the generating stations, the NAPAF for recovery of fixed charges shall be 83% till the same is reviewed.*

79. The petitioner has considered the Target availability of 83% during the period 2014-19. The Commission due to shortage of domestic coal supply has relaxed target availability norm to 83% for first 3 years from 1.4.2014 and the same shall be reviewed after 3 years. Hence, in view of the above provision, the target availability of 83% is allowed for the period 2014-15 to 2016-17 and 85% for the period 2017-18 & 2018-19 in terms of the Regulation 36(A)(a) of the 2014 Tariff Regulations.

### Gross Station Heat Rate (GSHR)

80. Regulation 36 (C)(b) (i) of the 2014 Tariff Regulations provides as under:

*(C) Gross Station Heat Rate*

*(b) New Thermal Generating Station achieving COD on or after 1.4.2014*





(i) Coal-based and lignite-fired Thermal Generating Stations

$$= 1.045 \times \text{Design Heat Rate (kCal/kWh)}$$

Where the Design Heat Rate of a generating unit means the unit heat rate guaranteed by the supplier at conditions of 100% MCR, zero percent make up, design coal and design cooling water temperature/back pressure.

Provided that the design heat rate shall not exceed the following maximum design unit heat rates depending upon the pressure and temperature ratings of the units:

Pressure Rating (Kg/cm <sup>2</sup> )	150	170	170	247
SHT/RHT (0C)	535/535	537/537	537/565	65/593
Type of BFP	Electrical Driven	Turbine Driven	Turbine Driven	Turbine Driven
Max Turbine Heat Rate (kCal/kWh)	1955	1950	1935	1850
Min. Boiler Efficiency				
Sub-Bituminous Indian Coal	0.86	0.86	0.86	0.86
Bituminous Imported Coal	0.89	0.89	0.89	0.89
<b>Max Design Unit Heat Rate (kCal/kWh)</b>				
Sub-Bituminous Indian Coal	2273	2267	2250	2151
Bituminous Imported Coal	2197	2191	2174	2078

Provided further that in case pressure and temperature parameters of a unit are different from above ratings, the maximum design unit heat rate of the nearest class shall be taken:

Provided also that where unit heat rate has not been guaranteed but turbine cycle heat rate and boiler efficiency are guaranteed separately by the same supplier or different suppliers, the unit design heat rate shall be arrived at by using guaranteed turbine cycle heat rate and boiler efficiency:

Provided also that where the boiler efficiency is below 86% for Subbituminous Indian coal and 89% for bituminous imported coal, the same shall be considered as 86% and 89% respectively for Sub-bituminous Indian coal and bituminous imported coal for computation of station heat rate:

Provided also that maximum turbine cycle heat rate shall be adjusted for type of dry cooling system:

Provided also that if one or more generating units were declared under commercial operation prior to 1.4.2014, the heat rate norms for those generating units as well as generating units declared under commercial operation on or after 1.4.2014 shall be lower of the heat rate norms arrived at by above methodology and the norms as per the Regulation 36(C)(a)(i):

Provided also that for Generating stations based on coal rejects, the Commission will approve the Design Heat Rate on case to case basis.

81. The petitioner has furnished the design turbine cycle heat rate and boiler efficiency as 1932 kcal/kWh and 85.67% respectively. Accordingly, the unit design heat rate worked out from the data furnished by petitioner is 2255.165 kcal/kWh (1932/0.8567)

82. In terms of Regulation 36(C)(b)(i) of the 2014 Tariff Regulations, for the new Thermal Generating Station achieving COD on or after 01.04.2014, the Gross Station Heat Rate=1.045 x Design Heat Rate (kcal/kWh) (1.045x2255.165 =2356.65 kcal/kWh). Provided that the design heat rate shall not exceed





the maximum design unit heat rates depending upon the pressure and temperature ratings of the units as specified by the CERC, where design heat rate for plants having temperature and pressure rating nearer to NTPL plant using sub bituminous coal is given as maximum 2250 kcal/kwh. The Design heat rate of 2255.165 kCal/kWh for this generating station is higher than the ceiling design heat rate of 2250 kcal/kwh. In view of this, the ceiling design heat rate of 2250 kcal/kwh has been considered as the 'design heat rate'. Thus, by taking the multiplying factor of 1.045 the applicable Station Heat rate is 2351.25 kcal/kwh (1.045x2250). Accordingly GSHR of 2351.25 kcal/kWh is considered for the purpose of tariff.

### Auxiliary Power Consumption

83. Regulation 36(E)(a)(i) of the 2014 Tariff Regulations provides for Auxiliary Power Consumption (APC) as under:

**(E) Auxiliary Energy Consumption**

(a) Coal-based generating stations except at (b) below:

	<b><i>With Natural Draft cooling tower or without cooling tower</i></b>
<i>(i) 200 MW series</i>	8.5%
<i>(ii) 300/330/350/500 MW and above</i>	
<i>Steam driven boiler feed pumps</i>	5.25%
<i>Electrically driven boiler feed pumps</i>	7.75%

*Provided further that for thermal generating stations with induced draft cooling tower, the norms shall be further increased by 0.5%*

84. The APC considered by the petitioner is 5.25% for this generating station and the same is as per the above regulations. However, the petitioner in this petition has sought for review of the normative APC of 6.25% to include the consumption for additional systems like Offshore conveyor system for coal transportation from mine to sea and from sea to the nearest Tuticorin port, two (2) nos of electrically operated Shore un-loader installed for unloading of coal from the ship and to transfer coal from ship's hold to materials handling conveyor of the jetty, and for the electrical equipment installed for the desalination plant for RO production. Accordingly, the APC requirement on account of above as submitted by the petitioner is as under:



- |                                  |                            |
|----------------------------------|----------------------------|
| 1. Cross country conveyor system | - 8.567 MW @66% = 5.655 MW |
| 2. Shore Un-loader               | - 1.805 MW @66% = 1.192 MW |
| 3. Desalination plant            | - 4.831 MW @64% = 3.092 MW |

85. The total additional auxiliary consumption works out to 9.939 MW~10 MW. Accordingly, the petitioner has considered an additional load of 9.939 MW for calculating APC for the generating station of 2x500MW capacity which works out to 1% (approx) of Installed Capacity. (i.e. additional 1 % of APC). In our view, the generating station has special features like Coal Transportation from port to project and also additional electrical equipment's installed towards desalination of sea water through RO system, for which there will be additional APC for running these additional systems. Moreover, the Commission had not considered the special features like desalination of sea water, coal conveying system from port to station etc., in the APC norms specified under the 2014 Tariff Regulations. In this background, we are of the considered view that this generating station should be allowed the APC of 6.25% as a special case, in terms of the prayer of the petitioner. Accordingly, the APC of 6.25 % is allowed. However, the petitioner is directed to furnish the details of the actual APC, PLF of the generating station from the COD of Unit-II till 31.3.2019 at the time of truing up of tariff, in terms of Regulation 8 of the 2014 Tariff Regulations.

### **Specific Oil Consumption**

86. Regulation 36(D)(a) of the 2014 Tariff Regulations, provides for Secondary fuel oil Consumption of 0.50 ml/kWh for coal-based generating stations. Hence, the Secondary fuel oil Consumption considered by the petitioner is as per norms and is allowed.

### **Interest on Working Capital**

87. Sub-section (a) of clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

*"28 (1) The working capital shall cover:*

*(a) Coal-based/lignite-fired thermal generating stations*

*(i) Cost of coal or lignite and limestone towards stock, if applicable, for 15 days for pit-head generating stations and 30 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower;*

*(ii) Cost of coal or lignite and limestone for 30 days for generation corresponding to the normative annual plant availability factor;*



(iii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;

(iv) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 29;

(v) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the normative annual plant availability factor; and

(vi) Operation and maintenance expenses for one month.”

### Fuel Component and Energy Charges in working capital

88. The petitioner has claimed cost for fuel component and Energy charges in working capital based on ‘as received’ GCV of coal and secondary fuel procured and burnt for the preceding three months of March, 2015, April 2015 and May, 2015 in respect of Unit-I (for the period 18.6.2015 to 28.8.2015) and for the preceding three months of June, 2015, July,2015and August, 2015 in respect of Unit-I and Unit-II(for the period from 29.8.2015 to 31.3.2019) as under:

	2015-16		2016-17	2017-18	2018-19
	Unit-I	Unit-II/ station			
Cost of Coal towards stock	5903.80	11966.27	11966.27	11966.27	11966.27
Cost of Coal towards Generation	5903.80	11966.27	11966.27	11966.27	11966.27
Cost of Secondary fuel oil 2 months	72.19	144.38	143.98	143.98	143.98

89. It is observed that the “as received” GCV of the coal furnished by the petitioner is same as “as billed” GCV of coal during the preceding three months. The petitioner in Form-15 has furnished “as billed” GCV and “as received” GCV of domestic coal as 3040 kCal/kg with price of 2562.12 ₹/MT for preceding 3 months from COD of Unit-I. Similarly, in case of Unit-II/generating station, “as billed” and “as received” GCV of coal during the preceding three months has been furnished by the petitioner as 3700 kCal/kg for domestic coal with average price of 2597 ₹/MT. It is observed that there is substantial difference in the value of preceding 3 months GCV of coal,prior to the COD of Units-I and II, even though there is negligible difference in the price of coal. We understand that the price of coal is not directly proportional, however, it appears that in case of Unit-I “as billed” GCV of 3040 kCal/kg is incorrect. However, as the petitioner has not clarified as to whether it had installed the equipment’s/



infrastructure required for taking sample of coal as per the Commission's order dated 25.1.2016 in Petition No.283/GT/2014, we have considered "as billed" & "as received" GCV of coal as 3700 kCal/kg (preceding 3 months from COD of Unit-II/Station). Further, for measurement of "as received" GCV of coal, the petitioner is directed to furnish detailed information on the infrastructure installed for measuring "as received" GCV of coal.

90. Accordingly, the cost for fuel components in working capital have been computed at 83% NAPAF for the years 2015-16 and 2016-17 and at 85% NAPAF for the year 2017-18 and 2018-19 based on 'as received' GCV of coal and price of coal procured and secondary fuel oil for the preceding three months from June, July, and August, 2015 in respect of COD of Unit-I and Unit-II of the generating Station is as under:

*(₹ in lakh)*

	2015-16		2016-17	2017-18	2018-19
	18.6.2015 to 28.8.2015	29.8.2015 to 31.3.2016			
Cost of Coal for stock- 30 days	1149.31	6895.89	11684.70	11966.26	11966.26
Cost of Coal for Generation-30 Days	1149.31	6895.89	11684.70	11966.26	11966.26
Cost of Secondary fuel oil 2 months	20.28	113.37	191.57	196.19	196.19

### Energy Charge Rate

91. As stated, the computation of energy charges and fuel component (coal cost) in working capital for the period 2014-19 period is based on "as received" GCV of coal as claimed by the petitioner. The petitioner has considered the actual blending ratio as indicated in Form-15 for domestic and imported coal for arriving at the energy charge rate for the generating station. The petitioner has claimed Energy Charge Rate (ECR) of 205.00 Paise/kWh for Unit-I in 2015-16 for and 207.60 Paise/kWh for the period from 2015-16 to 2018-19 based on the weighted average price, GCV of coal (as received basis) & Oil procured and burnt for the preceding three months. The Energy Charge Rate (ECR) is worked out based on operational norms specified in 2014 Tariff Regulations and on "as received" GCV of coal for preceding 3 months i.e. June, 2015, July, 2015 and August, 2015 in respect of the generating station for the period from COD of Unit-I as under:

	Unit	2015-19
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Capacity	MW	1000
Weighted average Gross Station Heat Rate	Kcal/kWh	2351.250
Auxiliar Energy Consumption	%	6.25
Weighted average GCV of oil (as fired)	Kcal/lit	10000
Weighted average GCV of Coal (as received)	Kcal/kg	4651.66 for Station
Weighted average price of oil	Rs/KL	33930.69 for Unit-I 31617.86 for Unit-II/ station
Weighted average price of Coal	Rs/MT	3876.51 for Unit-II/ station
<b>Rate of Energy Charge ex-bus</b>	<b>Paise/kWh</b>	<b>210.372 for Unit-II/ station</b>

92. The difference between the Energy charges claimed and allowed is on account of the fact that while the petitioner has considered the APC of 5.25 %, the Commission had allowed the APC of 6.25% for reasons stated in this order.

93. Accordingly, the Energy charges for 2 months on the basis of "as received" GCV of coal for the purpose of interest on working capital is worked out as under:

2015-16		2016-17	2017-18	2018-19
18.6.2015 to 28.8.2015	29.8.2015 to 31.3.2016			
2357.22	14135.01	23885.54	24461.10	24461.10

(₹ in lakh)

94. Based on the above, the fuel component and energy charges in working capital are allowed as under:

	2015-16		2016-17	2017-18	2018-19
	18.6.2015 to 28.8.2015	29.8.2015 to 31.3.2016			
Cost of Coal for 60 days	2298.63	13791.77	23369.40	23932.51	23932.51
Cost of Secondary fuel oil 2 months	20.28	113.37	191.57	196.19	196.19
Energy Charges for 2 months	2357.22	14135.01	23885.54	24461.10	24461.10

(₹ in lakh)

### Maintenance spares

95. The petitioner has claimed maintenance spares in working capital as under:

2015-16		2016-17	2017-18	2018-19
18.6.2015 to 28.8.2015	29.8.2015 to 31.3.2016			
1701.00	3402.00	3616.00	3844.00	4086.00

(₹ in lakh)



96. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provides for Maintenance spares @ 20% of the Operation & Maintenance expenses. Accordingly, maintenance spares @ 20 % of the O&M expenses, including water charges, is allowed as under:

2015-16		2016-17	2017-18	2018-19
18.6.2015 to 28.8.2015	29.8.2015 to 31.3.2016			
346.92	2044.63	3678.512	3906.512	4148.512

### O & M Expenses (1 month)

97. O&M expenses for 1 month claimed by the petitioner for the purpose of working capital is as under:

2015-16		2016-17	2017-18	2018-19
18.6.2015 to 28.8.2015	29.8.2015 to 31.3.2016			
708.75	1417.50	1506.67	1601.67	1702.50

98. Regulation 28(a)(vi) of the 2014 Tariff Regulations, provides for Operation and Maintenance expenses for one month for coal-based generating stations. Accordingly, the O&M expenses (1 month) allowed for the purpose of working capital is as under:

2015-16		2016-17	2017-18	2018-19
18.6.2015 to 28.8.2015	29.8.2015 to 31.3.2016			
144.550	851.929	1532.713	1627.713	1728.546

99. Accordingly, Interest on working capital is worked out and allowed as under:

	2015-16		2016-17	2017-18	2018-19
	18.6.2015 to 28.8.2015 (1 Unit)	29.8.2015 to 31.3.2016 (Both Units)			
O&M expense	144.55	851.93	1532.71	1627.71	1728.55
Receivables (Fixed Charges)	1756.85	10941.95	18466.37	18328.05	18169.42
Receivables (Variable Charges)	463.71	8341.97	23885.54	24461.10	24461.10
Maintenance Spare	346.92	2044.63	3678.51	3906.51	4148.51
Secondary Fuel oil cost	20.28	113.37	191.57	196.19	196.19
Fuel Stock	2298.63	13791.77	23369.40	23932.51	23932.51
<b>Total Working Capital</b>	<b>5030.94</b>	<b>36085.62</b>	<b>71124.11</b>	<b>72452.07</b>	<b>72636.28</b>
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%



<b>Interest on Working Capital</b>	<b>679.18</b>	<b>4871.56</b>	<b>9601.75</b>	<b>9781.03</b>	<b>9805.90</b>
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## Annual Fixed Charges

100. The annual fixed charges for the period 2015-19 approved for the generating station is summarized as under:

(₹ in lakh)

	2015-16		2016-17	2017-18	2018-19
	18.6.2015 to 28.8.2015 (1 Unit)	29.8.2015 to 31.3.2016 (Both Units)			
Return on Equity	2211.06	13469.73	22830.19	22962.92	23089.16
Interest on Loan	3385.50	21152.14	33745.70	31318.90	28868.26
Depreciation	2530.76	15935.09	26228.02	26372.87	26510.66
Interest on Working Capital	679.18	4871.56	9601.75	9781.03	9805.90
O & M Expenses	1734.60	10223.15	18392.56	19532.56	20742.56
<b>Total</b>	<b>10541.10</b>	<b>65651.67</b>	<b>110798.23</b>	<b>109968.28</b>	<b>109016.54</b>

Note: All figures under each head have been rounded. The figure in total column in each year is also rounded. As such, the sum of individual items may not be equal to the arithmetic total of the column

## Month to Month Energy Charges

101. Sub-clause (a) of clause (6) of Regulation 30 of the 2014 Tariff Regulations provides as under:

“6. Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal place in accordance with the following formula:

(a) For coal based and lignite fired stations

$$ECR = \{(GHR - SFC \times CVSF) \times LPPF / CVPF + SFC \times LPSFi + LC \times LPL\} \times 100 / (100 - AUX)$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic metre, as applicable.

CVSF = Calorific value of secondary fuel, in kCal per ml.

ECR = Energy charge rate, in Rupees per kWh sent out.

GHR = Gross station heat rate, in kCal per kWh.

LC = Normative limestone consumption in kg per kWh.

LPL = Weighted average landed price of limestone in Rupees per kg.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg”

102. The petitioner shall compute and claim the Energy Charges on month to month basis from the beneficiaries based on the above formulae read with Commission's order dated 25.1.2016 in Petition No. 283/GT/2014. The GCV of coal needs to be measured from the sample collected at the jetty for considering 'as received' basis in terms of provision of para 5 (sampling from ship during loading or unloading) and para 8 (sampling from loaded ships) of IS 436(Part-1/Section-1) -1964.



103. The Commission in order dated 19.2.2016 in Petition No. 33/MP/2014 (TPDDL v NTPC & anr) had directed as under:

*“The respondents shall introduce help desk to attend to the queries and concerns of the beneficiaries with regard to the energy charges. The contentious issues regarding the energy charges should be sorted out with the beneficiaries at the senior management level, preferably at the level of Executive Directors.”*

Accordingly, in line with the above decision, help desk shall be introduced by the petitioner and contentious issues if any, which arise in respect of energy charges for this generating station shall be sorted out with the beneficiaries at the Senior Management level

### **Application Fee and Publication Expenses**

104. The petitioner has sought the reimbursement of filing fees and the expenses incurred for publication of notices for application of tariff for the period 2015-19. The petitioner has deposited the tariff filing fees of ₹13200000/- each for the period 2015-17 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. The petitioner has also incurred charges towards publication of the said tariff petition in the newspapers. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations and in line with the decision in Commission's order dated 6.1.2016 in Petition No.232/GT/2014, the petitioner shall be entitled to recover the filing fees (*pro-rata to the contracted capacity*) and the expenses incurred on publication of notices directly from the respondents. The filing fees for the remaining years of the tariff period 2017-19 shall be recovered pro rata after deposit of the same and production of documentary proof.

105. The annual fixed charges approved for the period 2015-19 shall be adjusted against the interim tariff allowed vide order dated 13.10.2015 and is also subject to truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

106. Petition No. 135/GT/2015 is disposed of in terms of the above.

**-Sd/-**  
**(Dr. M.K.Iyer)**  
**Member**

**-Sd/-**  
**(A.S Bakshi)**  
**Member**

**-Sd/-**  
**(A.K.Singhal)**  
**Member**

**-Sd/-**  
**(Gireesh B Pradhan)**  
**Chairperson**





**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 292/GT/2014**

**Coram:**

**Shri. Gireesh B. Pradhan, Chairman  
Shri A.K.Singhal, Member  
Dr. M. K. Iyer, Member**

**Date of Hearing: 19.04.2016  
Date of Order : 24.01.2017**

**In the matter of**

Approval of tariff of Ramagundam Super Thermal Power Station Stage-I & II (2100 MW) for the period from 1.4.2014 to 31.3.2019

**And in the matter of**

NTPC Ltd  
NTPC Bhawan,  
Core-7, SCOPE Complex,  
7, Institutional Area, Lodhi Road,  
New Delhi-110003)

**.....Petitioner**

**Vs**

1. AP Eastern Power Distribution Company Ltd.  
Corporate Office, P&T Colony, Seethammadhara,  
Visakhapatnam – 530 013 - (AP)
2. AP Southern Power Distribution Company Ltd.  
Back Side Srinivasa Kalyana Mandapam  
Tiruchhanur Road, Kesavayana Gunta,  
Tirupathi – 517 503 (AP)
3. Telangana State Northern Power Distribution Company Ltd.  
formerly Andhra Pradesh Northern Power Distribution Company Ltd.  
H.No. 2-5-31/2 Vidyut Bhavan, Nakkalagutta,  
Hanamkonda Warangal – 506 001
4. Telangana State Southern Power Distribution Company Ltd.  
formerly AP Central Power Distribution Company Ltd.  
Mint Compound, Corporate Office  
Hyderabad – 500 063.
5. Bangalore Electricity Supply Company Ltd.  
Krishna Rajendra Circle  
Bangalore – 560 001.



6. -Mangalore Electricity Supply Company Ltd .  
Paradigm Plaza, A.B. Shetty Circle, Pandeshwar, Mangalore – 575 001.
7. Chamundeshwari Electricity Supply Corp. Ltd.  
Corporate Office, No. 927, L.J.Avenue,  
New Kantharaj Urs Road, Saraswathipuram  
Mysore – 570 009.
8. Gulbarga Electricity Supply Company Ltd.  
Main road, Gulbarga, 585 102,Karnataka.
9. Hubli Electricity Supply Company Ltd.  
Corporate office,  
P.B.Road, Navanagar, Hubli – 580 025.
10. Kerala State Electricity Board Ltd.  
Vaidyuthi Bhavanam,  
Pattom Thiruvananthapuram – 695 004.
11. Tamil Nadu Generation & Distribution Corporation Ltd.  
7th Floor ,NPKRR Maligai,  
144, Anna Salai, Chennai – 600 002.
12. Electricity Department Govt. of Puducherry  
137, NSC Bose Salai, Puducherry – 605 001
13. Electricity Department Government of Goa  
Vidyut Bhavan, 3rd Floor  
Panaji, GOA – 403 001

....Respondents

**Parties present:**

For Petitioner:                      Shri Ajay Dua, NTPC  
   Shri Nishant Gupta, NTPC  
   Shri Bhupinder Kumar, NTPC  
   Shri Rajeev Choudhary, NTPC  
   Shri V.K. Garg, NTPC  
   Shri Rohit Chhabra, NTPC

For Respondents:                      Shri S. Vallinayagam, Advocate, TANGEDCO

**ORDER**

This petition has been filed by the petitioner, NTPC for approval of tariff of Ramagundam Super Thermal Power Station Stage-I & II (3X200 MW + 3X500 MW) (hereinafter referred to as “the generating station”) for the period 2014-19 in accordance with the provisions of the Central



Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (herein after referred to as “the 2014 Tariff Regulations”).

2. The generating station with a capacity of 2100 MW comprises of three units of 200 MW and three units of 500 MW. The dates of commercial operation of the different units of the generating station are as under:

Units	Dates of commercial operation
Unit-I	1.3.1984
Unit-II	1.11.1984
Unit-III	1.5.1985
Unit-IV	1.11.1988
Unit-V	1.9.1989
<b>Unit-VI / Generating Station</b>	<b>1.4.1991</b>

3. The Commission vide order dated 27.6.2016 in Petition No. 217/GT/2014 had revised the tariff of the generating station for the period 2009-14 after truing-up of the additional capital expenditure in terms of Regulation 6 (1) of the 2009 Tariff Regulations , considering the capital cost of ₹230569.84 lakh as on 31.3.2014. The annual fixed charges approved by the order dated 27.6.2016 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	0.00	0.00	48.13	617.59	2396.41
Interest on Loan	129.77	131.45	141.49	217.94	259.47
Return on Equity	26779.77	26377.87	26030.91	26097.13	26837.67
Interest on Working Capital	10345.41	10458.29	10604.34	10710.74	10884.15
O&M Expenses	30420.00	32154.00	33999.00	35946.00	38004.00
Cost of Secondary Fuel Oil	3199.93	3199.93	3208.70	3199.93	3199.93
Compensation Allowance	935.00	955.00	975.00	975.00	975.00
Special Allowance	1000.00	2114.40	3353.02	3544.81	3747.57
<b>Total</b>	<b>72809.88</b>	<b>75390.95</b>	<b>78360.58</b>	<b>81309.13</b>	<b>86304.20</b>

4. The petitioner vide affidavit dated on 11.8.2014 has filed this petition for approval of tariff of the generating station in accordance with the provisions of the 2014 Tariff Regulations. Accordingly, the capital cost and the annual fixed charges claimed by the petitioner for the period 2014-19 are as under:



## Capital Cost

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	231355.07	234248.00	234455.00	236770.00	237070.00
Add: Additional capital expenditure	2892.93	207.00	2315.00	300.00	2257.00
<b>Closing Capital Cost</b>	<b>234248.00</b>	<b>234455.00</b>	<b>236770.00</b>	<b>237070.00</b>	<b>239327.00</b>
Average Capital Cost	232801.54	234351.50	235612.50	236920.00	238198.50

## Annual Fixed Charges

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1206.93	158.21	224.79	293.83	361.33
Interest on Loan	240.76	282.86	355.15	425.25	485.12
Return on Equity	23487.10	23581.86	23658.95	23738.88	23817.05
Interest on Working Capital	15642.68	15777.19	15947.33	16128.16	16319.70
O&M Expenses	39712.23	42214.37	44872.04	47700.59	50706.40
Compensation Allowance	1000.00	500.00	0.00	0.00	0.00
Special Allowance	7735.54	12214.87	17231.89	18326.11	19489.82
<b>Total</b>	<b>89025.24</b>	<b>94729.36</b>	<b>102290.15</b>	<b>106612.83</b>	<b>111179.42</b>

5. In compliance with the directions of the Commission, the petitioner has filed additional information and has served copies on the respondents. The respondents, KSEB, TANGEDCO have filed their replies and the petitioner has filed its rejoinder to the same. We now proceed to examine the claim of the petitioner based on the submissions of the parties and the documents available on record as discussed in the subsequent paragraphs.

## Capital Cost as on 1.4.2014

6. Clause 3 of Regulation 9 of the 2014 Tariff Regulations provides as under:

*“The Capital cost of an existing project shall include the following:*

*(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;*

*(b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and*

*(c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”*



7. The annual fixed charges claimed by the petitioner are based on opening capital cost of ₹231355.07 lakh as on 1.4.2014 as against ₹230569.84 lakh as on 31.3.2014 admitted vide order dated 27.6.2016 in Petition No. 217/GT/2014. Accordingly, the opening capital cost of ₹230569.84 lakh as on 1.4.2014 has been considered.

### **Projected Additional Capital Expenditure during 2014-19**

8. Regulation 14 (3) of the 2014 Tariff Regulations, provides as under:

*“14.(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:*

*(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;*

*(ii) Change in law or compliance of any existing law;*

*(iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;*

*(iv) Deferred works relating to ash pond or ash handling system in the original scope of work;*

*(v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;*

*(vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*

*(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal / lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;*

*(viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;*



(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolesce of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and

(x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialization of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station:

Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:

Provided further that any capital expenditure other than that of the nature specified above in (i) to (iv) in case of coal/lignite based station shall be met out of compensation allowance:

Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation.”

9. The break-up of the projected additional capital expenditure claimed by the petitioner during 2014-19 is detailed as under:-

								(₹ in lakh)
S. No.	Head of Work / Equipment	Regulation	2014-15	2015-16	2016-17	2017-18	2018-19	Total
1	Ash Dyke/ash pond related works	14(3)(iv)	447.69	0.00	1400.00	0.00	0.00	1847.69
2	N2 Dyke strengthening	14(3)(iv)	650.00	0.00	0.00	0.00	0.00	650.00
3	DAES	14(3)(ii)	1795.24	0.00	0.00	0.00	0.00	1795.24
4	Online CO2, SOX,NOX Analyser	14(3)(ii)	0.00	167.00	0.00	0.00	0.00	167.00
5	Online Effluent Analyzers	14(3)(ii)	0.00	40.00	0.00	0.00	0.00	40.00
6	MVW system for CHP	14(3)(ii) & 14(3)(iii)	0.00	0.00	690.00	0.00	0.00	690.00
7	Wagons	14(3)(x)	0.00	0.00	225.00	0.00	0.00	225.00
8	Earth covers for Ash Dyke	14(3)(iv)	0.00	0.00	0.00	300.00	300.00	300.00
9	Halon Replacement	14(3)(ii)	0.00	0.00	0.00	0.00	1357.00	1357.00



S. No.	Head of Work / Equipment	Regulation	2014-15	2015-16	2016-17	2017-18	2018-19	Total
10	Mulsifier system for transformers & cable galleries	14(3)(ii) & 14(3)(iii)	0.00	0.00	0.00	0.00	600.00	600.00
	<b>Total Additional Capital Expenditure</b>		<b>2892.93</b>	<b>207.00</b>	<b>2315.00</b>	<b>300.00</b>	<b>2257.00</b>	<b>7971.93</b>

10. The projected additional capital expenditure claimed by the petitioner has been discussed in the succeeding paragraphs.

### **Change in law, Safety and Security-Regulation 14(3)(ii) & 14(3)(iii)**

#### **Regulation 14(3)(ii)**

11. The petitioner has claimed the projected additional capital expenditure of ₹1795.24 lakh in 2014-15 towards Dry Ash Extraction System(DAES), ₹167.00 lakh in 2015-16 towards Online CO<sub>2</sub>,SOX,NOX Analyzer, ₹40.00 lakh in 2015-16 towards Online Effluent Analyzer and ₹1357.00 lakh in 2018-19 towards Halon Replacement. In regard DAES the petitioner has submitted that the same is essential in view of Ministry of Environment and Forest (MoEF) Gol, notification dated 3.11.2009 regarding ash utilisation. It is required to increase dry ash utilisation to 100% as part of maintaining environmental standards. The petitioner has further submitted that the Commission in its order dated 31.8.2012 in Petition No. 278/2009 and order dated 26.2.2014 in Petition No. 189/GT/2013, has allowed the same. It has also submitted that the asset was partly capitalised during 2009-14 and the remaining asset is projected to be capitalised in 2014-15. The petitioner has also submitted that the generating station units are running continuously and the work needs part isolations with careful execution causing extra time to execute the work. Accordingly, the petitioner has submitted that part capitalisation of this work is proposed to be capitalised in 2014-15. The petitioner has further submitted that Central Electricity Authority (CEA) vide the letter dated 18.6.2007 has also approved the expenditure for Dry Ash Extraction system and has accordingly prayed that the same may be allowed.



12. The petitioner has also claimed the projected additional capital expenditure of ₹167.00 lakh towards online CO<sub>2</sub>, SO<sub>X</sub>, NO<sub>X</sub> Analyzers and ₹40.00 lakh towards Online Effluent Analyzers in 2015-16. The petitioner, in justification of the same has submitted that these works/assets are required as per the Central Pollution Control Board (CPCB) directions to the State Pollution Control Boards (SPCBs) to ensure the installation of these assets. The petitioner has also submitted the SPCB letter dated 5.2.2014 along with the petition.

13. The petitioner has further projected additional capital expenditure of ₹1357.00 lakh in 2018-19 towards Halon Replacement. In justification for the same the petitioner has submitted that Halon fire protection system is provided for permanent fire fighting system and uses substances which are Ozone depleting in nature. As per the Environment (Protection) Act 1986, the Central Government laid down rules for Ozone Depleting Substances (Regulation and Control) Rules, 2000. It has submitted that as per the rules, no person or enterprise shall engage in any activity that uses ozone depleting substances unless he is registered with the authority and the generating companies are allowed to continue with the existing fire fighting system for a period of 10 years (upto 1.1.2010) after which the production and servicing of the same was stopped (Vide Schedule IV). The petitioner has further submitted that as per the Montreal Protocol on substances that deplete the Ozone layer, plants using Ozone depleting substances must phase out these systems and adopt systems which use substances that do not deplete the Ozone layer. Accordingly, it has proposed to replace Halon gas fire protection system with alternate inert gas in line with Central Electricity Authority (Technical Standards for construction of Electrical Plants and Electric Lines) Regulation, 2010 & ODS Rules, 2010. The petitioner has prayed to allow capitalization of Inert gas fire extinguishing system under Regulation 14(3)(ii).

#### **Regulation 14(3)(ii) & 14(3)(iii)**

14. In addition to the above the petitioner has also claimed projected additional capital expenditure of ₹690.00 lakh in 2016-17 towards MVW system for CHP and ₹600.00 lakh in 2018-19





towards Mulsifier system for transformers & cable galleries under Regulation 14(3)(ii) & 14(3)(iii) of the 2014 Tariff Regulations. In justification of the same the petitioner has submitted that assessment of availability, reliability and design adequacy of fire detection and protection system of all coal based thermal stations of NTPC was carried out inline with Regulation 12(5) of Central Electricity Authority (Technical Standards for construction of Electrical Plants and Electric Lines) Regulations, 2010, published in 20.8.2010. The petitioner has further submitted that major jobs identified to comply the said regulation with respect to fire detection and protection system at the generating station are: i) Installation of MVW ( Medium Velocity Water) spray system for the various coal conveyers of Stage-I and Stage-II CHP, ii) Installation of Mulsifier system for transformers and cable galleries of Stage-I & II. It further submits that augmentation of fire protection system of Coal Handling Plant (CHP) and Stacker Re-claimer area inline with CEA Regulation is essentially required to prevent any catastrophic damage in case fire breaks out in CHP as existence of coal in CHP area makes it vulnerable to fire hazard and mobile fire protection equipments may not be able to control the spread of fire. Accordingly, it has prayed that the capitalization on account of Augmentation of fire protection system under Regulation 14(3)(ii) and 14(3)(iii) of 2014 Tariff Regulation may be allowed.

15. The respondent, TANGEDCO in its reply for expenditure towards Halon Replacement has submitted that the CEA Notification dated 2.8.2010 is with regard to the standards to be followed for construction of electrical plants and electrical lines. The last unit of the generating station was commissioned during the year 1991. The respondent has prayed that the Commission may ascertain whether the existing fire detection systems are functioning properly, as the petitioner has not furnished the details for the same. It has submitted that in the event if fire detection devices installed earlier are working satisfactorily, the necessity for allowing the expenditure as claimed one more time is unreasonable and will give double benefit to the petitioner.

16. In regard with expenditure towards Dry Ash Extraction System(DAES), Online CO<sub>2</sub>,SO<sub>2</sub>,NO<sub>x</sub> Analyzer, Online Effluent Analyzer, MVW system for CHP, Halon Replacement and



Mulsifier system for transformers & cable galleries, the respondent, TANGEDCO has pointed that the petitioner has claimed Compensation Allowance during 2014-19. Since the Compensation Allowance is admissible to the petitioner the additional capital expenditure claimed under Regulation 14(3)(ii) & (iii) should be met from Compensation Allowance. Accordingly the claim of the petitioner may be rejected.

17. In response, the petitioner has submitted that the CEA Regulations are applicable for new as well as all existing power plants and since the generating station came into existence prior to these guidelines, are to be complied now. Accordingly the petitioner has stated that expenditure is admissible under Regulation 14(3)(ii) and 14(3)(iii) of the 2014 Tariff Regulation.

18. We have considered the submission of the parties. The petitioner has opted for both Compensation and Special Allowance. The Special Allowance is provided for meeting the requirement of expenses including R&M beyond the useful life of the generating station during the period 2014-19. Since the petitioner is allowed Special Allowance in terms of Regulation 16 of the 2014 Tariff Regulations for the period 2014-19 for meeting the requirement of expenses including R&M beyond the useful life of the generating station, the projected additional capital expenditure claimed by the petitioner under Regulation 14(3)(ii) & 14(3)(iii) is disallowed as the provisions under Regulation 14(3) are for the period of normal useful life of station. Hence, the projected additional capital expenditure claimed for dry ash extraction system, online CO<sub>2</sub>, SO<sub>X</sub>, NO<sub>X</sub> analyzer, online effluent analyzers, MVW system for CHP, Halon replacement and Mulsifier system for transformers & cable galleries under Regulation 14(3)(ii) & (iii) of the 2014 Tariff Regulations is not admissible. Accordingly, the petitioner shall meet the expenses from the "Special Allowance" permitted to the generating station during 2014-2019.

#### **Ash Dyke/ Ash Dyke Strengthening - Regulation 14(3)(iv)**

19. The petitioner has claimed projected additional capital expenditure of ₹1097.69 lakh in 2014-15 (₹447.69 lakh for Ash Dyke/Ash Pond and ₹650.00 lakh for N<sub>2</sub> dyke strengthening works), and



₹1400.00 lakh in 2016-17 towards works related to Ash Dyke/Ash Pond. In justification petitioner has submitted that the projected expenditure is for the planned work related to Ash handling and Ash pond which are continuous in nature during the operational life of the generating station. The petitioner has further submitted that Ash pond management is of dynamic nature with respect to geographic usage, involves modifications such as raising pond height, re-routing of roads, relocating piping, re-aligning spraying requirements etc. Ash pond needs capacity enhancement and strengthening periodically. Accordingly activities like ash dyke raising, pipe re-routing etc are needed periodically. The petitioner has prayed that the Commission may allow the same.

#### **Earth Cover for Ash Dyke- Regulation 14(3)(iv)**

20. The petitioner has claimed projected additional capital expenditure of ₹300.00 lakh in 2017-18 and ₹300.00 lakh in 2018-19 towards Earth covers for ash dyke and has submitted that after complete filling of ponds with ash, earth cover is required to prevent fugitive emissions and to facilitate growth of vegetation. It has pointed that the Commission in its order dated 31.8.2012 in Petition No. 278/2009 had allowed the same however, the Commission has recognized the deferment of this work in order dated 26.2.2014 in Petition No. 189/GT/2013. The petitioner has prayed that the Commission may allow the same.

21. The respondent, KSEB has submitted that separate funds are allocated for the works related to ash dyke and pond and the same may not be allowed under additional capital expenditure. The earth covers for ash dyke may be considered under the O&M expenses. The respondent, TANGEDCO has submitted that the generating station has completed 25 years in 2015-16 and hence it is only eligible for the special allowances and other claims of the petitioner under additional capital expenditure in respect of the ash dyke or pond is unjustified and the same may be disallowed. In response to KSEB, the petitioner has submitted that additional capital expenditure related to the ash dyke or pond and earth covers has been claimed under Regulation 14(3)(iv) of the 2014 Tariff Regulation. The petitioner has further submitted that the Commission had approved the capitalization of earth cover in its order dated 31.8.2012 in Petition No. 278/2009. In response to the



respondent, TANGEDCO the petitioner has submitted that the special allowance as per the Regulation 16 of the 2014 Tariff Regulation does not envisage capital expenditure necessitated for other reasons falling under Regulation 14 of the 2014 Tariff Regulation such as change in law, ash related schemes therefore the special allowance and additional capital expenditure carried out under regulation 14 can co-exist.

22. We have examined the matter. Regulation 16 of 2014 Tariff Regulations provides as under:

***“16. Special Allowance for Coal-based/Lignite fired Thermal Generating station:***

*(1) In case of coal-based/lignite fired thermal generating station, the generating company, instead of availing R&M may opt to avail a „special allowance“ in accordance with the norms specified in this regulation, as compensation for meeting the requirement of expenses including renovation and modernisation beyond the useful life of the generating station or a unit thereof, and in such an event, revision of the capital cost shall not be allowed and the applicable operational norms shall not be relaxed but the special allowance shall be included in the annual fixed cost:*

*Provided that such option shall not be available for a generating station or unit for which renovation and modernization has been undertaken and the expenditure has been admitted by the Commission before commencement of these regulations, or for a generating station or unit which is in a depleted condition or operating under relaxed operational and performance norms.*

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*(3) In the event of granting special allowance by the Commission, the expenditure incurred or utilized from special allowance shall be maintained separately by the generating station and details of same shall be made available to the Commission as and when directed to furnish details of such expenditure.”*

23. Regulation 27(7) of 2014 Tariff Regulations provides as under:

*“27(7): The generating company or the transmission license, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.”*

24. The generating station was declared under commercial operation on 1.4.1991. Accordingly the useful life in term of Regulation is 25 years. It is observed that the petitioner in this petition has claimed projected additional capital expenditure for the above works during the fag end of the completion of useful life of 25 years. The petitioner has also not submitted any comprehensive scheme of R&M for extension of life of the generating station. In terms of Regulation 16 of the 2014 Tariff Regulations, the petitioner has opted for “Special Allowance” from the year 2014-15 onwards



in order to meet the requirement of expenses including R&M beyond the useful life of the generating station. In this background, we are not inclined to allow the projected additional capital expenditure of ₹447.69 lakh and ₹650.00 lakh in 2014-15 and ₹1400.00 in 2016-17 as claimed by the petitioner towards Ash dyke or ash pond related works and N2 Dyke strengthening, we are also not allowing ₹300.00 lakh in 2017-18 and ₹300.00 lakh in 2018-19 towards Earth covers for ash dyke. Accordingly, the petitioner shall meet the expenses from the “Special Allowance” permitted to the generating station for 2014-2015.

### **Wagons -Regulation 14(3)(x)**

25. The petitioner has claimed projected additional capital expenditure of ₹225.00 lakh in 2016-17 towards replacement of Wagons under Regulation 14(3)(x) of the 2014 Tariff Regulations. The petitioner has submitted that six no. of wagons are to be procured for replacement of damaged wagons and de-capitalisation of these wagons have been taken into account by the Commission while approving additional capitalisation for 2007-09 in Petition No. 142/2009 with 36/2009. It has further submitted that the Railway wagons were also allowed by the Commission in order dated 31.8.2012 in Pet No 278/2009 and in order dated 26.2.2014 in Petition No 189/GT/2013 under Regulation 9(2)(vii) of 2009 Tariff Regulations however due to high gestation period and limited number of vendors, the same could not be capitalised in 2009-14. Accordingly, the petitioner has submitted that same is projected to be capitalised in 2016-17.

26. The respondent, TANGEDCO has submitted that the Commission in its order dated 31.8.2012 in Petition No. 278/2009 had allowed the additional capital expenditure of ₹228.00 lakh in 2011-12, and thereafter the expenditure was shifted in 2013-14 in order dated 26.2.2014 in Petition No. 189/GT/2013 shifted the projected expenditure of ₹228.00 lakh was allowed in 2013-14,. The petitioner has stated that the expenditure allowed was partly capitalised in 2009-14 and the remaining is projected to be capitalised during 2014-19. The respondent has further submitted that the petitioner has again shifted the expenditure from the previous period 2009-14 to the present



period 2014-19 and has stated that the expenditure claimed for the year 2016-17 is on projected basis. Accordingly, the respondent, TANGEDCO has prayed to direct the petitioner to claim the expenditure on actual basis at the time of truing up after finalization of vendors and procurement of wagons.

27. In response, the petitioner has submitted that the Commission had approved the expenditure for Wagons in order dated 31.8.2012 in Petition No. 278/2009 and order dated 26.2.2014 in Petition No. 189/GT/2013. The petitioner has further clarified that due to high gestation period and limited no. of vendors available the same could not be capitalized in 2009-14 and the expenditure towards the wagons is expected to be capitalized in 2016-17. It has further submitted that the details of the capitalization requested by the respondent shall be submitted at the time of filing of true-up petition.

28. We have considered the submission of the parties. The projected additional capital expenditure claimed towards replacement of wagons, after expiry of useful life of 25 years of the generating station, is in the nature of R&M. As stated, the petitioner has opted for Special Allowance for meeting the requirement of expenses including R&M beyond the useful life of the generating station during the period 2014-19. Since the petitioner is allowed Special Allowance in terms of Regulation 16 of the 2014 Tariff Regulations for the period 2014-19 for meeting the requirement of expenses including R&M beyond the useful life of the generating station, the projected additional capital expenditure of ₹225.00 lakh in 2016-17 is disallowed. The petitioner shall meet the expenses from the Special Allowance allowed to the generating station.

29. Based on the above discussions, the projected additional capital expenditure claimed for the period 2014-19 as in para 9 above has not been allowed.

30. Accordingly, the capital cost for the period 2014-19 is allowed as under

	<i>(₹ in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Opening Capital Cost</b>	230569.84	230569.84	230569.84	230569.84	230569.84



	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Add: Additional capital expenditure</b>	0.00	0.00	0.00	0.00	0.00
<b>Closing Capital Cost</b>	230569.84	230569.84	230569.84	230569.84	230569.84

## Debt-Equity Ratio

31. Regulation 19 of the 2014 Tariff Regulations provides as under:

*(1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*

*Provided that:*

*(i) where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*

*(ii) the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*

*(iii) any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt-equity ratio.*

**Explanation** - *The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.*

*(2) The generating Company or the transmission licensee shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilisation made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.*

*(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.*

*(4) In case of generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt:equity ratio has not been determined by the Commission for determination of tariff for the period ending*





31.3.2014, the Commission shall approve the debt:equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.

32. Accordingly, the gross normative loan and equity amounting to ₹115984.97 lakh and ₹114584.88 lakh, respectively as on 31.3.2014 as considered in order dated 27.6.2016 in Petition No. 217/GT/2014, has been considered as gross normative loan and equity as on 1.4.2014. The normative debt equity ratio of 70:30 has been considered in the case of additional capital expenditure. This is subject to truing-up in terms of the 2014 Tariff Regulations.

### **Return on Equity**

33. Regulation 24 of the 2014 Tariff Regulations provides as under:

**“24. Return on Equity:** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

*Provided that:*

i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:

ii). the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:

iii). additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

iv). the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted





*Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:*

*v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:*

*vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.*

34. Regulation 25 of the 2014 Tariff Regulations provides as under:

***“Tax on Return on Equity***

*(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non-generation or non-transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”.*

*(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:*

*Rate of pre-tax return on equity = Base rate / (1-t)*

*Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.*

35. The petitioner has claimed return on equity considering the base rate of 15.5% and effective tax rate of 23.939%. The respondent, KSEB has submitted the petitioner has not provided any documentary proof for considering the effective tax rate of 23.939%, and hence the petitioner may be directed to true up the grossed up rate of return on equity at the end of every financial year strictly as per Regulation 25(3) of the 2014 Tariff Regulation. In response, the petitioner has submitted that the effective tax rate has been calculated based on the estimated profit and tax to be paid for the financial year 2014-15 as per Regulation 25(2) of the 2014 Tariff Regulation and the

same rate has been considered upto 31.3.2019. However this rate shall be revised as per Regulation 25(3) for the billing of the relevant financial year.

36. We have considered the submissions. This issue being not confined to a single petition and being generic in nature as the issue is applicable to all NTPC petitions uniformly need deliberation. We have examined the documents submitted and observed that the regulation prescribe computation of effective tax rate on the basis of tax paid, still we deem it proper to allow grossing up on MAT rate considering the fact that the matter is getting decided in the year 2016-17. Accordingly, the effective tax rate (MAT) of 20.961% has been considered for the year 2014-15 and 21.342% for the year 2015-16 onwards up to the year 2018-19 for the purpose of grossing up of base rate of 15.5%. Accordingly, the rate of Return on Equity works out to 19.610% for the year 2014-15 and 19.705% for the year 2015-16 onwards. This is however, subject to true-up. Accordingly, return on equity has been worked out as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Notional Equity- Opening	114584.88	114584.88	114584.88	114584.88	114584.88
Addition of Equity due to additional capital expenditure	0.00	0.00	0.00	0.00	0.00
Normative Equity-Closing	114584.88	114584.88	114584.88	114584.88	114584.88
Average Normative Equity	114584.88	114584.88	114584.88	114584.88	114584.88
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
Tax Rate for the year (%)	20.961	21.342	21.342	21.342	21.342
Rate of Return on Equity (Pre Tax) (%)	19.610	19.705	19.705	19.705	19.705
<b>Return on Equity (Pre Tax) annualised</b>	<b>22470.09</b>	<b>22578.95</b>	<b>22578.95</b>	<b>22578.95</b>	<b>22578.95</b>

### Interest on Loan

37. Regulation 26 of the 2014 Tariff Regulations provides as under:

**“26. Interest on loan capital:** (1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.  
(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.



(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalization of such asset.

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such refinancing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

38. Interest on loan has been worked out as under:

- a. The gross normative loan of ₹115984.97 lakh as on 1.4.2014 has been considered.
- b. Cumulative repayment of loan of ₹113695.86 lakh as on 31.3.2014 as considered in order dated 27.6.2016 in Petition No.217/GT/2014 has been considered as on 1.4.2014.



- c. Addition to normative loan on account of the admitted additional capital expenditure has been considered on year to year basis.
- d. Depreciation allowed has been considered as repayment of normative loan during the respective years of the tariff period 2014-19. Accordingly, net normative closing loan as on 31.3.2015 works out to ₹919.42 lakh. However, considering the fact that the petitioner has recovered the entire depreciable value corresponding to the admitted capital cost as on 31.3.2015, the remaining balance normative loan of ₹919.42 lakh shall be repaid by the petitioner out of depreciation recovered till 31.3.2015. Accordingly, for the purpose of tariff ₹919.42 lakh has been considered as additional repayment during the year 2014-15.
- e. In line with the provisions of the regulation, the weighted average rate of interest has been calculated applying the actual loan portfolio existing as on 1.4.2014 along with subsequent additions during the period 2014-19, if any, for the generating station. In case of loans carrying floating rate of interest the rate of interest as provided by the petitioner has been considered for the purpose of tariff. The calculations for weighted average rate of interest on loan have been enclosed as Annexure-I to this order. The necessary calculation for interest on loan is as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross opening loan	115984.97	115984.97	115984.97	115984.97	115984.97
Cumulative repayment of loan upto previous year	113695.85	115984.97	115984.97	115984.97	115984.97
Net Loan Opening	2289.12	0.00	0.00	0.00	0.00
Addition due to additional capital expenditure	0.00	0.00	0.00	0.00	0.00
Repayment of loan during the year	1369.70	0.00	0.00	0.00	0.00
Additional Repayment of loan	919.42	0.00	0.00	0.00	0.00
Less: Repayment adjustment on account of de-capitalization	0.00	0.00	0.00	0.00	0.00
Add: Repayment adjustment on account of discharges corresponding to un-discharged liabilities deducted as on 1.4.2009	0.00	0.00	0.00	0.00	0.00
Net Repayment	2289.12	0.00	0.00	0.00	0.00
Net Loan Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	1144.56	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest of loan (%)	10.186	10.204	10.223	10.242	10.250
Interest on Loan	<b>116.58</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>



## Depreciation

39. Regulation 27 of the 2014 Tariff Regulations provides as under:

**“27. Depreciation:** (1) *Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.*

*Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.*

(2) *The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.*

(3) *The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:*

*Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:*

*Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long term power purchase agreement at regulated tariff:*

*Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.*

(4) *Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.*

(5) *Depreciation shall be calculated annually based on Straight Line Method and at rates specified in **Appendix-II** to these regulations for the assets of the generating station and transmission system:*

*Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.*

(6) *In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.*



(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services.”

40. The cumulative depreciation amounting to ₹203766.01 lakh as on 31.3.2014 as considered in order dated 27.6.2016 has been considered for the purpose of tariff. Further, the value of freehold land included in the average capital cost has been adjusted while calculating depreciable value for the purpose of tariff. Accordingly, the balance depreciable value (before providing depreciation) for the year 2014-15 works out to ₹205135.71 lakh. Since the useful life of the generating station as on 1.4.2014 exceed 12 years from the effective station COD, depreciation for the period 2014-19 has been calculated by spreading over the remaining depreciable value over the balance useful life of the generating station for respective years.

41. Accordingly, depreciation has been computed as follows:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	230569.84	230569.84	230569.84	230569.84	230569.84
Add: Additional Capital Expenditure	0.00	0.00	0.00	0.00	0.00
Closing Capital Cost	230569.84	230569.84	230569.84	230569.84	230569.84
Average Capital Cost	230569.84	230569.84	230569.84	230569.84	230569.84
Balance useful life at the beginning of the period	1.00	1.00	1.00	1.00	1.00
Depreciable value (excluding land)@ 90%	205135.71	205135.71	205135.71	205135.71	205135.71
Balance depreciable Value	1369.70	0.00	0.00	0.00	0.00
Depreciation (annualized)	<b>1369.70</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Cumulative depreciation up to previous year	203766.01	205135.71	205135.71	205135.71	205135.71
Less: Cumulative Depreciation adjustment on account of un-discharged liabilities	0.00	0.00	0.00	0.00	0.00
Less: Cumulative Depreciation reduction due to de-capitalization	0.00	0.00	0.00	0.00	0.00
Cumulative depreciation (at the end of the period)	205135.71	205135.71	205135.71	205135.71	205135.71



## Compensation Allowance

42. Regulation 17(1) of the 2014 Tariff Regulations provides as under:

**“17. Compensation Allowance:** (1) In case of coal-based or lignite-fired thermal generating station or a unit thereof, a separate compensation allowance shall be admissible to meet expenses on new assets of capital nature which are not admissible under Regulation 14 of these regulations, and in such an event, revision of the capital cost shall not be allowed on account of compensation allowance but the compensation allowance shall be allowed to be recovered separately.

(2) The Compensation Allowance shall be allowed in the following manner from the year following the year of completion of 10, 15, or 20 years of useful life:”

Years of operation	Compensation Allowance (₹ lakh/MW/year)
0-10	Nil
11-15	0.20
16-20	0.50
21-25	1.00

43. The petitioner has claimed compensation allowance (unit-wise) to meet the expenses on new assets of capital nature including in the nature of minor assets as under:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
1000.00	500.00	0.00	0.00	0.00

44. It is observed that Units I to IV of the generating stations have completed 25 years of useful life up to 2013-14 and Unit V & VI would complete 25 years of useful life in years 2014-15 and 2015-16 respectively. Accordingly the compensation allowance claimed by the petitioner is allowed as under:

(₹ in lakh)		
Description	Unit V	Unit VI
Capacity in MW	500	500
2014-15	500.00	500.00
2015-16	0.00	500.00
2016-17	0.00	0.00
2017-18	0.00	0.00
2018-19	0.00	0.00
<b>Total</b>	<b>500.00</b>	<b>1000.00</b>





## Special Allowance

45. Regulation 16 of the 2014 Tariff Regulations provides for Special Allowance for Coal-based

/Lignite fired Thermal Generating stations as under:

*“ (1) In case of coal-based/lignite fired thermal generating station, the generating company, instead of availing R&M may opt to avail a „special allowance” in accordance with the norms specified in this regulation, as compensation for meeting the requirement of expenses including renovation and modernization beyond the useful life of the generating station or a unit thereof, and in such an event, revision of the capital cost shall not be allowed and the applicable operational norms shall not be relaxed but the special allowance shall be included in the annual fixed cost:*

*Provided that such option shall not be available for a generating station or unit for which renovation and modernization has been undertaken and the expenditure has been admitted by the Commission before commencement of these regulations, or for a generating station or unit which is in a depleted condition or operating under relaxed operational and performance norms.*

*(2) The special Allowance shall be @Rs. 7.5 lakh/MW/year for the year 2014-15 and thereafter escalated @ 6.35 % every year during the tariff period 2014-15 to 2018-19, unit-wise from the next financial year from the respective date of completion of useful life with reference to the date of commercial operation of the respective unit of generating station:*

*Provided that in respect of a unit in commercial operation for more than 25 years as on 1.4.2014, this allowance shall be admissible from the year 2014-15:*

*Provided further that the special allowance for the generating stations, which, in its discretion, has already availed of a „special allowance” in accordance with the norms specified in clause (4) of regulations 10 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff Determination) Regulations, 2009, shall be allowed Special Allowance by escalating the special allowance allowed for the year 2013-14 @6.35% every year during the tariff period 2014-15 to 2018-19.*

*(3) In the event of granting special allowance by the Commission, the expenditure incurred or utilized from special allowance shall be maintained separately by the generating station and details of same shall be made available to the Commission as and when directed to furnish details of such expenditure.*

46. The Special Allowance claimed by the petitioner in is as follows:-

Special Allowance	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
	7735.54	12214.87	17231.89	18326.11	19489.82

47. Accordingly, the Special Allowance as per clause 16(2) of 2014 Tariff Regulations, for Stage-I and Stage-II of the generating station have been worked out and allowed as under:-

Units	Capacity in MW	Date of Commercial operation	Year of completion of Useful life	(₹ in lakh)				
				2014-15	2015-16	2016-17	2017-18	2018-19
I	200	1.3.1984	2008-09	1328.51	1412.87	1502.59	1598.00	1699.47
II	200	1.11.1984	2009-10	1328.51	1412.87	1502.59	1598.00	1699.47
III	200	1.5.1985	2010-11	1328.51	1412.87	1502.59	1598.00	1699.47
IV	500	1.11.1988	2013-14	3750.00	3988.13	4241.37	4510.70	4797.13





V	500	1.9.1989	2014-15	0.00	3988.13	4241.37	4510.70	4797.13
VI	500	1.4.1991	2016-17	0.00	0.00	4241.37	4510.70	4797.13
<b>Total Allowed</b>				<b>7735.54</b>	<b>12214.87</b>	<b>17231.89</b>	<b>18326.11</b>	<b>19489.82</b>

48. The petitioner has been allowed ₹74998.23 lakh as special allowance in tariff period 2014-19 and has also allowed ₹13759.78 lakh during 2009-14 period as special allowance. The petitioner is directed to maintain separately the details of expenditure incurred or utilized from special allowance for 2009-14 and 2014-19 period and shall make the details available to the Commission at the time of truing up. The petitioner shall also furnish the plan of action for utilization balance amount of special allowance recovered/ expected to be recovered at the time of true up.

### O&M Expenses

49. Regulation 29 (1) (a) of the 2014 Tariff Regulations provides the year-wise O&M expense norms claimed for the generating station of the petitioner as under:

Unit Size (MW)	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
200	23.90	25.40	27.00	28.70	30.51
500	16.00	17.01	18.08	19.22	20.43

50. Proviso to the Regulation 29 (1) (a) of the 2014 Tariff Regulations states as under:

*“Provided that the above norms shall be multiplied by the following factors for arriving at norms of O&M expenses for additional units in respective sizes for the units whose COD occurs on or after 1.4.2014 in the same station:*

200/210/250 MW	Additional 5 <sup>th</sup> & 6 <sup>th</sup> units	0.90
	Additional 7 <sup>th</sup> & more units	0.85
300/330/350 MW	Additional 4 <sup>th</sup> & 5 <sup>th</sup> units	0.90
	Additional 6 <sup>th</sup> & more units	0.85
500 MW and above	Additional 3 <sup>rd</sup> & 4 <sup>th</sup> units	0.90
	Additional 5 <sup>th</sup> & above units	0.85

51. Accordingly, the year-wise O&M expenses claimed by the petitioner in terms of the above said norms are allowed as under:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
38340.00	40755.00	43320.00	46050.00	48951.00



52. As the generating station has 3 units of 200 MW capacity in Stage-I and 3 units of 500 MW capacity in Stage-II and all these units have achieved COD prior to the period 2009-14, the multiplication factors as per proviso to Regulation 19 (a) of the 2009 Tariff regulations and proviso to Regulation 29 (1) (a) of the 2014 tariff regulations are not applicable in this case. Accordingly, the multiplication factor has not been considered while determining the O&M expenses for generating station for the period 2014-19. Consequently, the normative O&M expenses claimed by the petitioner in terms of the 2014 Tariff Regulations are allowed.

### Water Charges

53. Regulation 29(2) of the 2014 Tariff Regulations provide as under:

*“29.(2) The Water Charges and capital spares for thermal generating stations shall be allowed separately:*

*Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details regarding the same shall be furnished along with the petition:*

*Provided that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization”*

54. In terms of the above regulation, water charges are to be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check of the details furnished by the petitioner.

55. The petitioner vide its petition dated 11.8.2014 has claimed water charges applicable for 2013-14 in 2014-15 and escalated the same at 6.35% annually. The water charges claimed by the petitioner are as follows:

<i>(₹ in lakh)</i>				
<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
1372.23	1459.37	1552.04	1650.59	1755.40



56. The Commission vide ROP dated 19.4.2016 had directed the petitioner to furnish the details in respect of water charges such as contracted quantum of water and allocated quantity, actual annual water consumption for the last 5 years (2009-14) along with the copy of the notification(s) of water charges. In response to the Commission's directions, the petitioner has submitted the details of the plant, type of cooling water system and water consumption and total water charges for the last 5 years i.e. 2009-14 vide affidavit dated 18.5.2016. The petitioner has revised the water charges for 2013-14 in this submission. The submission of the petitioner are as follows:

Description	Remarks
Type of Plant	Coal
Type of cooling water system	Closed Circuit Cooling
Total water charges in 2013-14	₹1521.07 lakh

FY	Quantity (MCFT)	Rate (₹/MCFT)	Total Charges (in ₹ lakh)	Remarks
2009-10	2429.90	28029.75*	681.09	-
2010-11	3349.80		938.94	-
2011-12	2731.79		765.71	-
2012-13	2623.88		1132.83	Water Charges: ₹735.45 lakh Power Charges: ₹397.38 lakh
2013-14	2865.95		1521.07	Water Charges: ₹803.31 lakh Power Charges: ₹717.76 lakh

\*For water drawn from Sriram Sagar Project (SRSP) and Yellampally Project (SYP). Water drawn from Yellampally Project was started from August 2012 for which variable charges for power for lifting the water are also paid in addition to the water charges.

57. The petitioner has also submitted the relevant notification of Irrigation & CAD Department Government of Andhra Pradesh dated 2.4.2002 and notification of Irrigation & CAD Department Government of Telangana State dated 14.8.2014 for applicable rate of water charges for the generating station.

58. As per provisions of Regulation 29(2) of the 2014 Tariff Regulations, Water charges are to be allowed separately. It is observed that there is significant difference in actual water charges of 2013-14 and 2014-15 claimed by the petitioner and water charges has been escalated at the rate of 6.35% on year to year for the period 2014-19. We have considered the submissions of the petitioner in respect of water charges vide its petition dated 11.8.2014 and vide affidavit dated 18.5.2016.



However, the petitioner has not furnished the basis of calculation of quantity of consumptive water during 2014-19 tariff period.

59. In this backdrop, we have considered the water charges claimed by the petitioner in 2014-15 and allowed the same for 2014-19 without any year to year escalation. Based on this, water charges allowed for the period 2014-19 are as under:

<i>(₹ in lakh)</i>	
<b>Year</b>	<b>Water charges allowed</b>
2014-15	1372.23
2015-16	1372.23
2016-17	1372.23
2017-18	1372.23
2018-19	1372.23

60. The petitioner is directed to furnish the details such as the contracted quantity, allocation of water, the actual water consumed during 2014-19, the basis of calculation of quantity of consumptive water and computation of water charges at the time of truing-up of tariff in terms of the 2014 Tariff Regulations. In addition, the petitioner shall also confirm / clarify as to whether the water charges have been paid on the basis of contracted quantity or on the basis of allocation.

61. Accordingly, the total O&M expenses including water charges as claimed by the petitioner and allowed for the purpose of tariff is as under:

<i>(₹ in lakh)</i>					
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O&M Expenses as claimed	38340.00	40755.00	43320.00	46050.00	48951.00
O&M Expenses as allowed	38340.00	40755.00	43320.00	46050.00	48951.00
Water charges as claimed	1372.23	1459.37	1552.04	1650.59	1755.40
Water charges as allowed	1372.23	1372.23	1372.23	1372.23	1372.23
Total O&M Expenses as claimed (including Water charges)	39712.23	42214.37	44872.04	47700.59	50706.40
<b>Total O&amp;M Expenses as allowed(including Water charges)</b>	<b>39712.23</b>	<b>42127.23</b>	<b>44692.23</b>	<b>47422.23</b>	<b>50323.23</b>



## Capital spares

62. The petitioner has not claimed capital spares on projection basis during the period 2014-19. Accordingly, the same has not been considered in this order. The claim of the petitioner, if any, at the time of truing-up, shall be considered on merits, after prudence check.

## Operational Norms

63. The operational norms in respect of the generating station claimed by the petitioner are as under:

Target Availability (%)	83.00
Heat Rate (kcal/kWh)	2396.43
Auxiliary Energy Consumption (%)	6.679
Specific Oil Consumption (ml/ kWh)	0.50

64. The operational norms claimed by the petitioner in accordance with Regulation 36 of the 2014 Tariff Regulations and discussed as under:

## Normative Annual Plant Availability Factor (NAPAF)

65. Regulation 36 (A) (a) of the 2014 Tariff Regulations provides as under:

*“(a) All Thermal generating stations, except those covered under clauses (b) (c) (d) & (e)- 85%.*

*Provided that in view of the shortage of coal and uncertainty of assured coal supply on sustained basis experienced by the generating stations, the NAPAF for recovery of fixed charges shall be 83% till the same is reviewed.*

*The above provision shall be reviewed based on actual feedback after 3 years from 01.04.2014.”*

66. The petitioner has considered the target availability norm of 83% during 2014-19. The petitioner has submitted that the average PLF at NTPC Stations during the period 2009-10, 2010-11 was 90.81% and 88.29% respectively and during 2011-12, 2012-13 was lower at 85% and 83% respectively due to various factors. The petitioner has further submitted that Commission has prescribed lower/tighter operational norms based on the premise that Indian economy would recover and at Para 37.45 of the "Statement of Reasons" to the Tariff Regulations, 2014 has further stated that there will be improvement in the industrial growth in the country which will induce Discoms to



give more schedules thereby enabling generating stations to achieve improved loading and PLF during the tariff period 2014-19 compared to the period 2011-13. The petitioner has further submitted that in the event power demand continues to remain low and the PLF remains at the lower levels, and accordingly has prayed to grant liberty to approach the Commission for seeking relaxation of Operating Norms as per the actual scenario and PLF during the period 1.4.2014 onwards.

67. The respondent, KSEB vide its reply dated 21.10.2014 has submitted that the generating station has not faced any coal shortages during the past and the petitioner may be directed to adopt NAPAF of 85% instead of 83% allowed for the generating station facing coal shortages. In response, the petitioner has submitted that the reasons of the lower P.L.F. during last 2 years are due to use of imported coal to overcome the shortage of domestic coal, partial loading due to lower demand, use of must run renewable energy etc., which is likely to persist during 2014. The petitioner has further prayed for liberty to approach for relaxation of operating norms in case the underlying assumption based on which the operating norms were fixed does not materialize i.e. PLF % of stations for 2014-19 do not increase compared to 2011-13 and submitted that the contention of the respondent is misplaced and liable to be rejected.

68. We have considered the submission of the parties. The Commission due to shortage of domestic coal supply has relaxed target availability norm to 83% for first 3 years from 1.4.2014 and the same shall be reviewed after 3 years. Hence, the target availability of 83% is allowed for the period 2014-15 to 2016-17 and 85% for the period 2017-18 & 2018-19 in terms of the Regulation 36(A) (a) of the 2014 Tariff Regulations.

#### **Heat Rate (kCal/kWh)**

69. The petitioner has claimed the Gross Station Heat Rate of 2396.43 kCal/kWh after computing the weighted average heat rate for the combination of 200 MW and 500 MW units in the generating station.



70. In line with the Regulation 36(C)(a)(i) of the 2014 Tariff Regulations, the Gross Station Heat Rate of the generating station has been computed as under:

Unit Size (MW)	No. of Units	Type of boiler feed pump	Unit-wise heat rate (kCal/kWh)	Wt. avg. gross station heat rate (kCal/kWh)
200	3	Electrical	2450	2396.43
500	3	Steam	2375	

71. The Gross Station Heat Rate computed above for the generating station has been considered for computation of the energy charges for the 2014-19 tariff period.

### **Auxiliary Energy Consumption**

72. The petitioner has claimed Auxiliary Energy Consumption at 6.68% during 2014-19 period as defined by Regulation 36(E)(a) of the Tariff Regulations, 2014 and the same is allowed.

### **Specific Oil Consumption**

73. Regulation 36(D)(a) of the 2014 Tariff Regulations, provides secondary fuel oil consumption of 0.50 ml/kWh for coal-based generating station. Hence, the secondary fuel oil consumption considered by the petitioner is as per norms and is allowed.

### **Interest on Working Capital**

74. Sub-section (c) of clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

*“28. Interest on Working Capital:*

*(1) The working capital shall cover*

*(b) Open-cycle Gas Turbine/Combined Cycle thermal generating stations*

*(i) Fuel cost for 30 days corresponding to the normative annual plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;*

*(ii) Maintenance spares @ 30% of operation and maintenance expense specified in regulation 29; and*

*(iii) Liquid fuel stock for 15 days corresponding to the normative annual plant availability factor and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel’;*



(iv)Receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;

(v) Operation and maintenance expenses for one month.”

### Fuel Components and Energy Charges in working capital

75. The petitioner has claimed cost for fuel components in working capital based on “as fired” GCV of coal procured and secondary fuel oil burnt for the preceding three months i.e. January 2014 to March 2014 as mentioned below:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal for Stock for 15 days	12874.32	12874.32	12874.32	12874.32	12874.32
Cost of Coal for Generation for 30 days	25748.63	25748.63	25748.63	25748.63	25748.63
Cost of Main Secondary Fuel Oil for 2 months	559.02	559.02	559.02	559.02	559.02

76. The issue of “as received” GCV for computation of energy charges was challenged by NTPC and other generating companies through writ petition in the Hon’ble High Court of Delhi. The writ petition was heard on 7.9.2015 and Hon’ble High Court of Delhi had directed that the Commission shall decide the place from where the sample of coal should be taken for measurement of GCV of coal on as received basis within 1 month on the request of petitioners.

77. As per the directions of the Hon'ble High Court, the Commission vide order dated 25.1.2016 in Petition No. 283/GT/2014 has decided as under:

*“58. In view of the above discussion, the issues referred by the Hon’ble High Court of Delhi are decided as under:*

*(a) There is no basis in the Indian Standards and other documents relied upon by NTPC etc. to support their claim that GCV of coal on as received basis should be measured by taking samples after the crusher set up inside the generating station, in terms of Regulation 30(6) of the 2014 Tariff regulations.*

*(b) The samples for the purpose of measurement of coal on as received basis should be collected from the loaded wagons at the generating stations either manually or through the Hydraulic Auger in accordance with provisions of IS 436(Part1/Section1)-1964 before the coal is unloaded. While collecting the samples, the safety of personnel and equipment as discussed in this order should be ensured. After collection of samples, the sample preparation and testing*





shall be carried out in the laboratory in accordance with the procedure prescribed in IS 436(Part1/Section1)-1964 which has been elaborated in the CPRI Report to PSERC.”

78. Further, the petitioner has claimed energy charge rate (ECR) of 219.201 Paise/kWh based on the weighted average price, GCV of coal (as fired basis) & oil procured and burnt for the preceding three months. It is observed that the petitioner has not placed on record the GCV of coal on “as received” basis though the petitioner was required to furnish such information with effect from 1.4.2014 in terms of the regulation. In compliance with the direction of the Hon’ble High Court of Delhi, the Commission in its order dated 25.1.2016 in Petition No. 283/GT/2014 has clarified that the measurement of GCV of coal on as received basis shall be taken from the loaded wagons at the unloading point either manually or through the Hydrolic Augur. The petitioner has not submitted the required data regarding measurement of GCV of coal in compliance with the directions contained in the said order dated 25.1.2016. The present petition cannot be kept pending till the petitioner submits the required information. Hence, the Commission has decided to compute fuel components and the energy charges in the working capital have been computed by provisionally considering the GCV of coal on as “billed basis” and allowing an adjustment for total moisture as per the formula given as under:

$$\frac{\text{GCV} \times (1 - \text{TM})}{(1 - \text{IM})}$$

Where: GCV=Gross Calorific value of coal  
 TM=Total moisture  
 IM= Inherent moisture

79. In view of the above, the cost for fuel components in working capital have been computed at 83% NAPAF for 2014-15, 2015-16 and 2016-17 and 85% NAPAF for 2017-18 and 2018-19, and based on “as billed” GCV of coal and price of coal procured and secondary fuel oil for the preceding three months from January 2014 to March 2014 and allowed as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal for stock– 15 days	9947.89	9947.89	9947.89	10187.60	10187.60
Cost of Coal for generation– 30 days	19895.78	19895.78	19895.78	20375.20	20375.20
Cost of secondary fuel oil – two months	559.02	560.55	559.02	572.49	572.49



80. Similarly, the Energy Charge Rate (ECR) based on operational norms specified in 2014 Tariff Regulations and on “as billed” GCV of coal for preceding 3 months i.e. January 2014 to March 2014 is worked out as under:

	<b>Unit</b>	<b>2014-19</b>
Capacity	MW	2100
Gross Station Heat Rate	kCal/kWh	2396.43
Aux. Energy Consumption	%	6.68%
Weighted average GCV of oil (As fired)	kCal/Lt.	9078.00
Weighted average GCV of Coal (As Billed)	kCal/kg	4565.00
Adjustment on account of coal received at the generating station for equilibrated basis (Air dried) in the billed GCV Of Coal India		*
Weighted average price of oil	₹/KL	43934.48
Weighted average price of Coal	₹/MT	3025.73
Rate of energy charge ex-bus	₹/kWh	1.722**

\* To be calculated by the petitioner based on the adjustment formula

\*\* To be revised as per the figures at Sr. No. 6

81. The GCV of coal as computed above shall be adjusted in the light of the GCV of coal on “as received basis” computed by the petitioner as per our directions in order dated 25.1.2016 in Petition No. 283/GT/2014.

### **Maintenance spares**

82. The petitioner has claimed maintenance spares in the working capital as under:

<i>(₹ in lakh)</i>				
<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
7942.45	8442.87	8974.41	9540.12	10141.28

83. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provides for Maintenance spares @ 20% of the Operation & Maintenance expenses as specified in Regulation 29. As specified in Regulation 29 (2) of the 2014 Tariff Regulations, the maintenance spares @ 20% of the operation & maintenance expenses, including water charges, are allowed as under:



(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
7942.45	8425.45	8938.45	9484.45	10064.65

### Receivables

84. Receivables equivalent to two months of capacity charge and energy charges has been worked out and allowed as under:

(₹ in lakh)					
	2014-15	2015-16	2016-17	2017-18	2018-19
Variable Charges (two months)	40894.49	41006.53	40894.49	41879.90	41879.90
Fixed Charges (two months)	12755.79	12951.07	13402.52	13925.34	14438.89
<b>Total</b>	<b>53650.28</b>	<b>53957.59</b>	<b>54297.01</b>	<b>55805.24</b>	<b>56318.79</b>

### O&M Expenses

85. O&M expenses for 1 month claimed by the petitioner for the purpose of working capital are as under:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
3309.35	3517.86	3739.34	3975.05	4225.53

86. Based on the O&M expense norms specified by the Commission and in terms of the Commission's order dated 6.10.2015 in Petition No. 186/GT/2014, the O&M expenses for 1 month is allowed as under:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
3309.35	3510.60	3724.35	3951.85	4193.60

### Rate of interest on working capital

87. Clause (3) of Regulation 28 of the 2014 Tariff Regulations provides as under:

*“Interest on working Capital: (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later.”*



88. In terms of the above regulations, SBI PLR of 13.50% (Bank rate 10.00 + 350bps) has been considered for the purpose of calculating interest on working capital. Interest on working capital has been computed as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of coal towards stock- 15 days	9947.89	9947.89	9947.89	10187.60	10187.60
Cost of coal towards generation- 30 days	19895.78	19895.78	19895.78	20375.20	20375.20
Cost of secondary fuel oil- 2 months	559.02	560.55	559.02	572.49	572.49
Maintenance Spares	7942.45	8425.45	8938.45	9484.45	10064.65
Receivables- 2 months	53650.28	53957.59	54297.01	55805.24	56318.79
O & M expenses- 1 Month	3309.35	3510.6	3724.35	3951.85	4193.60
<b>Total Working Capital</b>	<b>95304.77</b>	<b>96297.87</b>	<b>97362.50</b>	<b>100376.82</b>	<b>101712.32</b>
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>12866.14</b>	<b>13000.21</b>	<b>13143.94</b>	<b>13550.87</b>	<b>13731.16</b>

89. Accordingly, annual fixed charges approved for the generating station for the period from 1.4.2014 to 31.3.2019 is summarized as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1369.70	0.00	0.00	0.00	0.00
Interest on Loan	116.58	0.00	0.00	0.00	0.00
Return on Equity	22470.09	22578.95	22578.95	22578.95	22578.95
Interest on Working Capital	12866.14	13000.21	13143.94	13550.87	13731.16
O&M Expenses	39712.23	42127.23	44692.23	47422.23	50323.23
Compensation Allowance	1000.00	500.00	0.00	0.00	0.00
Special allowance	7735.54	12214.87	17231.89	18326.11	19489.82
<b>Total</b>	<b>85270.30</b>	<b>90421.26</b>	<b>97647.01</b>	<b>101878.16</b>	<b>106123.17</b>

### Month to Month Energy Charges

90. Clause 6 sub-clause (a) of Regulation 30 of the 2014 Tariff Regulations provides for computation and payment of Capacity Charge and Energy Charge for thermal generating stations:

*“6. Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal place in accordance with the following formula:*



(a) For coal based and lignite fired stations

$$ECR = \{(GHR - SFC \times CVSF) \times LPPF / CVPF + SFC \times LPSFi + LC \times LPL\} \times 100 / (100 - AUX)$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic metre, as applicable.

CVSF = Calorific value of secondary fuel, in kCal per ml.

ECR = Energy charge rate, in Rupees per kWh sent out.

GHR = Gross station heat rate, in kCal per kWh.

LC = Normative limestone consumption in kg per kWh.

LPL = Weighted average landed price of limestone in Rupees per kg.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg

91. The petitioner shall compute and claim the Energy Charges on month to month basis from the beneficiaries based on the formulae given under Regulation 30(6)(a) of the 2014 Tariff Regulations, 2014 read with Commission's order dated 25.1.2016 in Petition No. 283/GT/2014.

92. The petitioner has been directed by the Commission in its order dated 19.2.2016 in Petition No. 33/MP/2014, to introduce helpdesk to attend to the queries of the beneficiaries with regard to the Energy Charges. Accordingly, contentious issues if any, which arise regarding the Energy Charges, should be sorted out with the beneficiaries at the Senior Management level.

### **Application Fee and Publication Expenses**

93. The petitioner has sought the reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the period 2014-19. The petitioner has deposited the filing fees of ₹92.40 lakhs for the period 2014-15 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations and in line with the decision in Commission's order dated 5.1.2016 in Petition No. 232/GT/2014, we direct that the petitioner shall be entitled to recover *pro rata*, the filing fees and the expenses incurred on publication of notices for the period 2014-15 directly from the respondents on submission of documentary proof. The filing fees for the remaining years of the tariff period 2015-19 shall be recovered *pro rata* after deposit of the same and production of documentary proof.



94. The annual fixed charges approved for the period 2014-19 as above are subject to truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

95. Petition No. 292/GT/2014 is disposed of in terms of the above.

**Sd/-  
(Dr. M.K.Iyer)  
Member**

**Sd/-  
(A. K. Singhal)  
Member**

**Sd/-  
(Gireesh B Pradhan)  
Chairperson**



**WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2014-19 TARIFF PERIOD**

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Net loan – Opening	4310.00	4250.00	3677.50	3105.00	2562.50
Additions	0.00	0.00	0.00	0.00	0.00
Repayments of Loans during the year	60.00	572.50	572.50	542.50	512.50
Net loan – Closing	4250.00	3677.50	3105.00	2562.50	2050.00
Average Net Loan	4280.00	3963.75	3391.25	2833.75	2306.25
Rate of Interest on Loan with monthly rests	<b>10.1860%</b>	<b>10.2039%</b>	<b>10.2231%</b>	<b>10.2419%</b>	<b>10.2500%</b>
Interest on loan	435.96	404.46	346.69	290.23	236.39



**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No: 444/GT/2020**

**Coram:**

**Shri P.K. Pujari, Chairperson  
Shri I.S Jha, Member  
Shri Arun Goyal, Member**

**Date of Order: 17<sup>th</sup> November, 2021**

**In the matter of**

Petition for approval of tariff of Ramagundam Super Thermal Power Station Stage-III (500 MW) for the period from 1.4.2019 to 31.3.2024

**And**

**In the matter of**

NTPC Limited,  
NTPC Bhawan, Core-7, Scope Complex,  
7, Institutional Area, Lodhi Road,  
New Delhi-110 003.

**.....Petitioner**

**Vs**

1. AP Eastern Power Distribution Company Limited,  
Corporate Office P&T Colony, Seethammadhara,  
Visakhapatnam – 530 013 - (AP).
2. AP Southern Power Distribution Company Limited,  
Corporate Office, Back Side Srinivasa Kalyana Mandapam,  
Tiruchhanur Road, Kesavayana Gunta,  
Tirupathi – 517 503 (AP)
3. Telangana State Northern Power Distribution Company Limited,  
H.No. 2-5-31/2, Vidyut Bhavan, Nakkalagutta, Hanamkonda,  
Warangal – 506 001 (AP)
4. Telangana State Southern Power Distribution Company Limited,  
Mint Compound, Corporate Office,  
Hyderabad (AP) – 500 063.
5. Tamil Nadu Generation & Distribution Corporation Limited,  
144, Anna Salai,  
Chennai – 600 002
6. Bangalore Electricity Supply Company Limited,  
Krishna Rajendra Circle,  
Bangalore - 560 009.





7. Mangalore Electricity Supply Company Limited,  
MESCOM Bhavan, Corporate Office,  
Bejai, Kavour cross road,  
Mangaluru-575004, Karnataka

8. Chamundeshwari Electricity Supply Corporation Limited,  
Corporate Office, No. 29, Vijayanagar, 2nd stage, Hinkal,  
Mysore – 570 017.

9. Gulbarga Electricity Supply Company Limited,  
Main road, Gulbarga,  
Gulbarga – 585 102, Karnataka.

10. Hubli Electricity Supply Company Limited,  
Corporate office, P.B.Road, Navanagar,  
Hubli – 580 025.

11. Kerala State Electricity Board Limited,  
Vaidyuthi Bhavanam, Pattom,  
Thiruvananthapuram – 695 004.

12. Electricity Department,  
Government of Puducherry,  
137, Netaji Subhash Chandra Bose Salai,  
Puducherry- 605001

...Respondents

**Parties present:**

Shri Venkatesh, Advocate, NTPC  
Shri Vikas Maini, Advocate, NTPC  
Shri Sachin Jain, NTPC  
Shri S. Vallinayagam, Advocate, TANGEDCO  
Dr. R. Kathiravan, TANGEDCO  
Ms. R. Ramalakshmi, TANGEDCO

**ORDER**

This petition has been filed by the Petitioner, NTPC Limited (in short 'NTPC') for approval of tariff of Ramagundam Super Thermal Power Station Stage-III (500 MW) (in short 'the generating station') for the 2019-24 tariff period, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations").



2. The generating station comprises of one unit with a capacity of 500 MW and the date of commercial operation of the said unit is 25.3.2005. The Commission vide its order dated 8.11.2016 in Petition No.268/GT/2014 had determined the tariff of the generating station for the 2014-19 tariff period. Thereafter, the Petitioner filed Petition No. 220/GT/2020 for revision of tariff of the generating station for 2014-19 tariff period, based on truing-up exercise and the Commission vide its order dated 25.9.2021 had determined the capital cost and annual fixed charges of the generating station as stated below:

### Capital Cost allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	156863.30	157508.45	157163.70	157918.33	157774.53
Add: Additional capital expenditure	645.15	(-) 344.75	754.63	(-) 143.80	(-) 187.50
<b>Closing Capital Cost</b>	<b>157508.45</b>	<b>157163.70</b>	<b>157918.33</b>	<b>157774.53</b>	<b>157587.03</b>
Average Capital Cost	157185.87	157336.07	157541.01	157846.43	157680.78

### Annual Fixed Charges allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	8335.24	8347.29	8357.31	2903.97	2899.34
Interest on Loan	2208.95	1509.28	833.57	399.31	165.01
Return on Equity	9247.24	9300.92	9313.04	9331.09	9346.37
Interest on Working Capital	3882.34	3904.53	3928.45	3889.22	3929.03
O&M Expenses	8343.00	8860.44	9561.76	9976.87	10700.16
Compensation Allowance	0.00	100.00	100.00	100.00	100.00
<b>Total</b>	<b>32016.78</b>	<b>32022.46</b>	<b>32094.13</b>	<b>26600.47</b>	<b>27139.90</b>

### Present Petition

3. The Petitioner has filed the present petition for determination of tariff of the generating station for the 2019-24 tariff period based on the provisions of the 2019 Tariff Regulations. The capital cost and the annual fixed charges claimed by the Petitioner in the present petition are as under:



**Capital Cost eligible for ROE at normal rate***(Rs. in lakh)*

	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Opening Capital Cost	157971.40	159267.40	160226.40	161438.40	164290.40
Add: Additional capital expenditure	1296.00	959.00	1212.00	2852.00	9632.00
Less: De-capitalization during the year/period	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year/period	0.00	0.00	0.00	0.00	0.00
<b>Closing Capital Cost</b>	<b>159267.40</b>	<b>160226.40</b>	<b>161438.40</b>	<b>164290.40</b>	<b>173922.40</b>
Average Capital Cost	158619.40	159746.90	160832.40	162864.40	169106.40

**Annual Fixed Charges claimed***(Rs. in lakh)*

	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	2971.61	3073.29	3182.08	3411.25	4216.09
Interest on Loan	30.37	0.00	0.00	0.00	121.27
Return on Equity	8937.57	9001.10	9062.26	9176.76	9528.47
Interest on Working Capital	3667.92	3699.18	3721.72	3753.80	3796.91
O&M Expenses (including water charges & security expenses)	12405.84	12970.98	13372.71	13913.44	14418.63
<b>Total</b>	<b>28013.30</b>	<b>28744.54</b>	<b>29338.77</b>	<b>30255.25</b>	<b>32081.38</b>

4. This petition, along with Petition No. 220/GT/2020 (truing up of tariff of the generating station for the 2014-19 tariff period) was heard through video conferencing on 13.8.2020 and the Commission, after directing the Petitioner to file certain additional information, reserved its orders in these petitions. In compliance to the directions, the Petitioner vide affidavit dated 4.11.2020 and 22.2.2021 has filed the additional information, after serving copy to the Respondents. The Respondent, KSEBL vide affidavit dated 13.8.2020 and the Respondent, TANGEDCO vide affidavits dated 17.9.2020 and 5.3.2021 have filed their replies. The Petitioner vide separate affidavits dated 4.12.2020 has filed its rejoinder to the said replies. Based on the submissions of the parties and documents available on record, we proceed to determine the tariff of the generating station, in the present petition, for the 2019-24 tariff period, on prudence check, as stated in the subsequent paragraphs.



## **Capital Cost**

5. Clause (1) of Regulation 19 of the 2019 Tariff Regulations provides that the capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects. Clause 3 of Regulation 19 of the 2019 Tariff Regulations provides that the capital cost of an existing project shall include the following:

*(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*

*(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*

*(c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;*

*(c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*

*(d) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*

*(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

6. The annual fixed charges claimed in the petition are based on opening capital cost of Rs.157971.40 lakh as on 1.4.2019. However, the Commission vide its order dated 25.9.2021 in Petition No. 220/GT/2020 had approved the capital cost of Rs.157587.03 as on 31.3.2019. Accordingly, in terms of Regulation 19(3) of the 2019 Tariff Regulations, the capital cost of Rs.157587.03 (after removal of un-discharged liabilities) as on 31.3.2019, has been considered as the capital cost as on 1.4.2019, on cash basis.

## **Additional Capital Expenditure**

7. Clauses (1) and (2) of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations provide as under:

*“25. Additional Capitalisation within the original scope and after the cut-off date:*



*(1) The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check:*

*(a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*

*(b) Change in law or compliance of any existing law;*

*(c) Deferred works relating to ash pond or ash handling system in the original scope of work;*

*(d) Liability for works executed prior to the cut-off date;*

*(e) Force Majeure events;*

*(f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and*

*(g) Raising of ash dyke as a part of ash disposal system.*

*(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:*

*(a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;*

*(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;*

*(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and*

*(d) The replacement of such asset or equipment has otherwise been allowed by the Commission.*

#### *26. Additional Capitalisation beyond the original scope*

*(1) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:*

*(a) Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;*

*(b) Change in law or compliance of any existing law;*

*(c) Force Majeure events;*

*(d) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;*

*(e) Deferred works relating to ash pond or ash handling system in additional to the original scope of work, on case to case basis:*

*Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M) or repairs and maintenance under O&M expenses, the same shall not be claimed under this Regulation;*

*(f) Usage of water from sewage treatment plant in thermal generating station.*



(2) In case of de-capitalisation of assets of a generating company or the transmission licensee, as the case may be, the original cost of such asset as on the date of de-capitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalised.

8. The year-wise, projected additional capital expenditure, claimed by the Petitioner, for the 2019-24 tariff period, is as under:

Head of Work/ Equipment	(Rs. in lakh)				
	Projected Additional Capital Expenditure claimed				
	2019-20	2020-21	2021-22	2022-23	2023-24
Ash Water Recycling System	1296.00	144.00	0.00	0.00	0.00
Hydrobins	0.00	0.00	0.00	2717.00	302.00
Ash dyke buttressing/ raising and other related works	0.00	0.00	0.00	0.00	9330.00
Up-gradation of DCS Controller and HMI	0.00	815.00	0.00	0.00	0.00
CLO2 system	0.00	0.00	1212.00	135.00	0.00
Less: De-capitalization	0.00	0.00	0.00	0.00	0.00
Add: Discharges of liabilities	0.00	0.00	0.00	0.00	0.00
<b>Net additional capital expenditure claimed</b>	<b>1296.00</b>	<b>959.00</b>	<b>1212.00</b>	<b>2852.00</b>	<b>9632.00</b>

### Ash Water Recycling System

9. The Petitioner has claimed projected additional capital expenditure of Rs.1296.00 lakh in 2019-20 and Rs.144.00 lakh in 2020-21 for works relating to Ash Water Recirculation System (AWRS) under Regulation 26(1)(b) of the 2019 Tariff Regulations. The Petitioner has submitted that the Environment Clearance (in short 'EC') for Ramagundam Stage-IV (1600 MW, Telangana Phase-I) was accorded by the Ministry of Environment and Forest and Climate Change (MOEF&CC) vide its letter dated 20.1.2016 and in the said EC, it was directed for immediate installation of AWRS for reuse of drain water. Accordingly, the Petitioner has submitted that AWRS is being installed/ augmented as per the directions contained in EC of Ramagundam Stage-IV (also called as Telangana Ph-1, 2 x 800 MW project). The Respondent KSEBL has submitted that the Petitioner has not considered the de-capitalization of



existing assets which are used for ash water handling. It has also stated that while approving the same, the gross fixed asset and depreciation may also be considered.

10. The matter has been examined. The Petitioner has claimed projected additional capitalization of Rs.1296.00 lakh in 2019-20 and Rs.144.00 lakh in 2020-21 under Regulation 26(1)(b) of the 2019 Tariff Regulations in respect of the said asset/ work, which are beyond the original scope of work of the project, under change in law or for compliance with the existing law. The Commission vide ROP of the hearing dated 13.8.2020, had directed the Petitioner to clarify the following:

*“(xix) Justification for the projected additional capitalization of Rs.1440 lakh for the period 2019-21 towards Ash Water Recirculation System, being proposed in fulfillment of MOEF&CC Environmental Clearance condition for Telangana Phase -1 (2 x 800 MW). It shall be clarified whether the MOEF&CC Environmental Clearance for Telangana Phase -1 (2 x 800 MW) mandates AWRS system for this generating station. If not mandated, the reason as to how the claim is made under change in law may be submitted.”*

11. In compliance of the above, the Petitioner has submitted that condition A(viii) of EC dated 20.1.2016 granted by MOEF&CC for Telangana Ph-1 (2x800 MW) Project (earlier called as Ramagundam Stage-IV) mandates that AWRS is to be installed for existing TPPs, for use of drain water. It is observed from EC dated 20.1.2016 that MOEF&CC, in respect of Telangana Ph-1 (2x800 MW), has inserted a condition that AWRS shall be immediately installed for the existing projects and till such time, the ash pond effluents should not be discharged into agricultural fields etc. According to this, EC has made it mandatory for the Petitioner to install AWRS not only for the yet to be constructed Telangana Ph-1 (2x800 MW project), but also for Stages I, II and III of Ramagundam generating station, as these are the existing units/ stations, at the same premises. In view of the fact that the Petitioner is required to comply with the condition in EC dated 20.1.2016 of MOEF&CC, the projected additional capital expenditure of Rs.1296.00 lakh claimed in 2019-20 and Rs.144.00 lakh in 2020-21 claimed towards AWRS is allowed under Regulation 26(1)(b) of the





2019 Tariff Regulations. The Petitioner is, however, directed to submit the details of the de-capitalized assets, if any, against AWRS at the time of truing up of tariff failing which the expenditure may not be considered.

### **Hydrobins**

12. The Petitioner has claimed projected additional capital expenditure of Rs.2717.00 lakh in 2022-23 and Rs.302.00 lakh in 2023-24 towards 'Construction of Hydrobins' under Regulation 26(1)(b) of the 2019 Tariff Regulations. The Petitioner has submitted that as per MOEF&CC notification of 25.1.2016, hydrobins have been envisaged for ash handling system, to achieve 100% ash utilization. The Respondent KSEBL has submitted that since the Petitioner has not submitted the detailed break-up of the extent of ash utilization achieved and its reasonableness, the claim may be disallowed. The Petitioner has clarified that achieving 100% ash utilization is a statutory requirement in terms of MOEF&CC notification of 25.1.2016 and that the mine void filling has contributed to a considerable portion in the ash utilization.

13. The submissions have been considered. In our view, the installation of Hydrobins is for meeting the statutory requirement of 100% ash utilization as per the 2016 MOEF&CC notification, by providing the prescribed quality of ash for mine filling. Accordingly, the projected additional capital expenditure of Rs.2717.00 lakh in 2022-23 and Rs.302.00 lakh in 2023-24 claimed for 'Construction of Hydrobins' is allowed under Regulation 26(1)(b) of the 2019 Tariff Regulations. The Petitioner shall, at the time of truing-up of tariff, furnish the (i) details of the extent of ash utilization achieved prior to and after the installation of hydrobins and (ii) awarded price discovered through competitive bidding and the amount actually capitalized against Hydrobins, failing which, the expenditure may not be considered.





### **Ash dyke buttressing/ raising and other related works**

14. The Petitioner has claimed projected additional capital expenditure of Rs.9330.00 lakh in 2023-24 for Ash dyke buttressing/ raising and other related works. The Petitioner has submitted that it had engaged experts to enhance the capacity of existing lagoons and disposal of ash in a safe manner and based on the advice of experts, the Petitioner is constructing a 'Peripheral Buttressing Dyke' from the downstream of the starter dyke. The Petitioner has claimed the additional capital expenditure under Regulation 25(1)(c) and Regulation 25(1)(g) of the 2019 Tariff Regulations.

15. The Commission vide ROP of the hearing dated 13.8.2020 directed the Petitioner to furnish the estimated expenditure envisaged for Ash Handling system/ Ash Pond/ Ash Dyke Raising within the original scope of work along with the actual expenditure incurred under these heads as on COD of the generating station and from COD to 31.3.2019. In response, the Petitioner vide affidavit dated 4.11.2020, has submitted that on the basis of price of 3<sup>rd</sup> quarter of 1998 price level, the Board of the Petitioner Company had approved an amount of Rs.2903.00 lakh for Ash Dyke related works and the expenditure on ash handling system forms part of the main plant turnkey project. The Petitioner has also furnished detailed break-up of the activities, along with the actual additional capital expenditure incurred for each works related to Ash pond/ Ash Handling System/ Ash Dyke raising, which are within the original scope of work from COD of the generating station till 2018-19. The Petitioner has also submitted that the total actual additional capital expenditure towards Ash Pond/ Ash Dyke works from COD till 31.3.2019 is Rs.2122.50 lakh, which is lesser than the amount of Rs.2903.00 lakh, as approved at the time of Investment Approval. The Petitioner has further submitted that the Commission has recognised such deferred works relating to Ash Pond/ Ash Dyke/ Ash handling system in all the Tariff



Regulations and there are provisions for additional capitalisation of such expenditure, even after the cut-off date of the generating station. It has submitted that the original estimate of Rs.2903.00 lakh for Ash Dyke work, at the time of approval in 2001, may not be appropriate for allowing further additional capital expenditure for Ash Handling System under Regulation 25(1)(c) of the 2019 Tariff Regulations. The Petitioner has submitted that due to lapse of time and since the investment approval is about 20 years old, which has effect on rupee depreciation and the escalation in prices. Further, the design for construction of ash dyke had also undergone changes. It has further been submitted that the approved cost of the project is Rs.178099.00 lakh, as per the 3<sup>rd</sup> quarter price level of 1998 and the closing capital cost as on 31.3.2019 as allowed by order dated 8.11.2016 in Petition No. 268/GT/2014 is Rs.158000.00 lakh, which is much lower than the original approved cost of Rs.178099.00 lakh. The Petitioner has stated that even after allowing the additional capital expenditure of Rs.9330.00 lakh in 2019-24 on Ash dyke system, the allowed capital cost for tariff purpose would be within the approved capital cost.

16. The details of the additional expenditure capitalized towards Ash handling system and Ash dyke works, as furnished by the Petitioner, vide affidavit dated 4.11.2020 are as under:

<i>(Rs.in lakh)</i>		
Description of work	Amount capitalized	Year of capitalization
Ash Handling System		
U-7 Ash Handling system	344.21	2005-06
Main Plant Supply-AHP	34.94	2005-06
Total amount claimed towards Ash handling works	379.15	
<b>Ash Dyke works</b>		
Additional pedestals around Ash dyke (Garland area)	0.35	2007-08
Ash Pond: Construction of pump house, sump, discharge channel RCC culverts and service roads along downstream of N2 main dyke in ash	3.63	2007-08



Adjustment of Balance works in hydrogen building, foam pump house ash	(-)1.03	2007-08
Ash Silo area development works - Stage-III	31.51	2007-08
N2 starter dyke and first raising flood escape and downstream of N2 Flood Escape works	12.38	2007-08
N2 Pond starter dyke downstream seepage works	20.99	2007-08
Ash brick pavement and associated works	20.66	2007-08
<b>Sub-total</b>	<b>88.49</b>	
Raising of N-1 Dyke	678.05	2008-09
Ash brick pavement and associated works	3.43	2008-09
<b>Sub-total</b>	<b>681.48</b>	
Ash Pond raisings	10.94	2009-10
Ash Silo-2 Fabrication and Erection works	16.89	2009-10
<b>Sub-total</b>	<b>27.83</b>	
Ash Pond raisings	13.33	2010-11
Ash Pond raisings	547.08	2011-12
Raising of Ash Dyke in N1 pond (Total Service	685.63	2014-15
Material Cost in Raising of N1 pond	78.66	2014-15
<b>Total amount claimed towards Ash Dyke</b>	<b>2122.49</b>	

17. The matter has been examined. The claim of the Petitioner is for deferred work related to Ash pond or Ash handling system, as per approved scheme and is also within the original scope of work. Against an amount of Rs.2903.00 lakh, originally approved by the Board of the Petitioner Company, the Petitioner has already incurred additional capital expenditure Rs.2122.50 lakh up to 31.3.2019, for works related to Ash pond/ Ash handling System/ Ash Dyke raising. The Commission in its order dated 25.9.2021 in Petition No. 220/GT/2020, had allowed the actual additional capital expenditure of Rs.728.58 lakh (on cash basis) during the 2014-19 tariff period. Accordingly, from the details furnished by the Petitioner, the total additional capital expenditure allowed till 31.3.2019 is Rs.2122.49 lakh. Now, the Petitioner has claimed additional capital expenditure of Rs.9330.00 lakh in 2023-24 for Ash dyke buttressing/ raising and other related works on projection basis. Amount approved by the Board of Directors of the Petitioner company during investment approval for Ash Dyke related works and the expenditure up to 31.3.2019 on Ash handling system, is as follows:



		<i>(Rs. in lakh)</i>
		<b>Amount</b>
Original Estimated Cost (as approved by Petitioner's Board)	(A)	2903.00
Expenditure incurred as on 31.3.2019 (submitted vide affidavit dated 4.11.2020)	(B)	2122.50
Remaining capital expenditure from approved Investment Approval cost	(C=A-B)	780.50

18. The Petitioner, in Petition No. 220/GT/2020, had not claimed any additional capital expenditure towards fly ash transportation expenses, based on the MOEF&CC notification dated 25.1.2016. However, it is observed from CEA Report on "Fly Ash Generation at Coal/Lignite based Thermal Power Stations and It's Utilization in the Country" for 2016-17, 2017-18, 2018-19, 2019-20 and 2020-21, that the generating station has been meeting target of utilizing 100% of its fly ash, as shown under:

<i>(Rs.in lakh)</i>			
Year	Fly ash generation (MT)	Fly ash Utilization (MT)	Utilization (%)
2016-17	4.71	4.38	93.10
2017-18	4.54	4.59	101.00
2018-19	4.27	4.71	100.10
2019-20	3.81	4.51	118.00
2020-21	3.85	4.28	111.00

19. Keeping in view the ash utilisation trend, as above, we find no merit in allowing further additional capital expenditure towards Ash dyke work. It is also observed that the Petitioner has projected additional capital expenditure of Rs.9330.00 lakh during the 2019-24 tariff period, which exceeds the approved Investment Approval cost of Rs.2903.00 lakh. In this background, we restrict the projected additional capital expenditure of Rs.9330.00 lakh claimed by the Petitioner and allow only Rs.780.50 lakh (see table under paragraph 17 above).



### **Up-gradation of DCS Controller and HMI**

20. The Petitioner has claimed projected additional capital expenditure of Rs.815.00 lakh for Up-gradation of Max DNA DCS Controllers & HMI in 2020-21 under Regulation 25(2)(c) of the 2019 Tariff Regulations i.e. for replacement of the asset or equipment which is necessary on account of obsolescence of technology. In justification of the same, the Petitioner has submitted that the existing controller/instrumentation are being maintained through repairing and spares are not available. It has submitted that M/s BHEL has advised to upgrade the existing controller/instrumentation for continued support of spares/ services. The Respondent, KSEBL has submitted that the additional capital expenditure may be met from the O&M expenses allowed to the generating station. Similar submissions have been made by the Respondent, TANGEDCO. The Petitioner vide affidavit dated 4.11.2020 has submitted that the existing DCS and HMI system was awarded in 2003-04 with the original value of the asset as USD 4309970 and HMI up-gradation was done in 2012-13. It has stated that considering the dollar exchange rate at the time of investment approval of the generating station as US \$1 = Rs.42.60, the value of the asset works out as Rs.1836.05 lakh. The Petitioner has also submitted that out of complete Max DNA DCS/HMI system, only DPUs, racks, ribbon cable and bus terminators have to be replaced under this up-gradation. It has further submitted that the workstations along with necessary software, network switches, mini-UPS and printers will be further replaced in this up-gradation scheme. The Petitioner has submitted that separate values/ breakup of these items under this contract is not available.

21. The matter has been examined. The Petitioner has, under this up-gradation scheme, proposed to replace only few components of the existing system due to unavailability of spares. In view of the fact that M/s BHEL (OEM) has stopped the support of spares/ services to the existing system in place and has advised the



Petitioner to upgrade the existing system, we allow the projected additional capital expenditure of Rs.815.00 lakh. However, in the absence of the gross value of replaced assets i.e. DPUs, racks, ribbon cable and bus terminators which were put in service in the year of COD (2004-05), the “assumed deletion” of Rs.373.36 lakh has been worked out, by applying the discounting rate of 5% on the current value of these assets i.e. Rs.815.00 lakh in the year 2020-21. Accordingly, on net basis, the projected additional capital expenditure of Rs.441.64 lakh is allowed towards the up-gradation of DCS Controller and HMI.

### **CLO<sub>2</sub> (Chlorine dioxide) system**

22. The Petitioner has claimed projected additional capital expenditure of Rs.1212.00 lakh in 2021-22 and Rs.135.00 lakh in 2022-23 for works relating to ClO<sub>2</sub> system under Regulations 26(1)(b) and 26(1)(d) of 2019 Tariff Regulations. The Petitioner has submitted that in the interest of public safety, the Chlorine dosing system is being replaced by Chlorine dioxide (ClO<sub>2</sub>) system, which is much safer and less hazardous than chlorine. The Petitioner has submitted that at present in the generating station, chlorine gas is being dozed directly at various stages of water treatment to maintain water quality and to inhibit organic growth in the water retaining structures/ equipment such as clarifiers, storage tanks, cooling towers, condenser tubes & piping etc. It has submitted that chlorine dosing is done from chlorine stored in cylinders/ tonners and chlorine gas is very hazardous and may prove fatal in case of leakage since handling and storage of the same involves risk to the life of public at large. The Petitioner has submitted that in the interest of public safety, the chlorine dosing system is now being replaced by chlorine dioxide (ClO<sub>2</sub>) system, which is much safer and less hazardous than chlorine. The Petitioner has submitted that at its Kudgi project, the Department of Factories, Boiler, Industrial Safety and Health, State Government of Karnataka has asked the Petitioner to replace the highly hazardous



gas chlorination system with ClO<sub>2</sub> system. It has further submitted that the Odisha State Pollution Control Board while issuing consent to establish, in case of the Darlipalli generating station of the Petitioner, had requested the Petitioner to explore the possibility of installing ClO<sub>2</sub> system instead of Chlorine gas system. Further, the Petitioner vide its affidavit dated 4.11.2020 has submitted that the existing chlorine dosing system was executed as a part of EPC package and, hence, the costing details are included in the Main Plant Turnkey package. It has submitted that some parts of existing chlorine dosing system, which can be re-used in the proposed chlorine dioxide system, are not part of the cost projected for additional capitalization. The Petitioner has further submitted that the equipment/ asset that will be de-capitalized, consists of chlorinators with booster pumps and that the present ClO<sub>2</sub> system will be used for whole Ramagundam generating station which consists of Stage-I, Stage-II & Stage-III with a total capacity of 2600 MW. The Petitioner has added that a total amount of Rs.118.50 lakh is to be de-capitalized for assets (i.e. chlorinator for PTP, chlorinator for CW System & CW-2 system for Stage-I and Stage-II).

23. The Respondent, KSEBL has submitted that Regulation 26(1)(b) of the 2019 Tariff Regulations provides for capitalization of additional expenditure under change in law or for compliance with the existing law and Regulation 26(1)(d) of the 2019 Tariff Regulations provides for additional capitalization of expenditure required for higher security and safety of the plant. It has submitted that the proposed additional capital expenditure does not qualify under these regulations and the Petitioner may meet such expenses from the normative O&M expenses allowed to the generating station. Similar submission has been made by the Respondent TANGEDCO.



24. We have examined the matter. The Petitioner has claimed additional capital expenditure of Rs.1212.00 lakh in 2021-22 and Rs.135.00 lakh in 2022-23 for works relating to ClO<sub>2</sub> system under Regulation 26(1)(b) of the 2019 Tariff Regulations. The Petitioner has submitted that for Kudgi project of the Petitioner, the Government of Karnataka had directed the Petitioner to replace the highly hazardous gas chlorination system with ClO<sub>2</sub> system. It is observed that the letter dated 23.9.2019 addressed by the Directorate of Factories, Industrial Safety & Health, State Government of Karnataka to GM, NTPC, pertains to site clearance of Kudgi Super Thermal Power station of the Petitioner. This letter, in no manner, can be termed as a change in law event or for compliance with any existing law in respect of this generating station (Ramgundam TPS) warranting the additional capitalization of the expenditure. As regards the claim of the Petitioner under Regulation 26(1)(d) of the 2019 Tariff Regulations, we find no specific direction or advice from any Governmental or statutory authorities as regards the requirement of this item i.e. chlorine dosing system to be replaced by Chlorine Dioxide (ClO<sub>2</sub>) system, for safety and security of the generating station. In view of this, the projected additional capital expenditure of Rs.1212.00 lakh in 2021-22 and Rs.135.00 lakh in 2022-23 for works relating to ClO<sub>2</sub> system is not allowed.

25. Based on the above discussion, the projected additional capital expenditure allowed for the 2019- 24 tariff period is as under:

<i>(Rs. in lakh)</i>					
<b>Head of Work/ Equipment</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Ash Water Recycling System (AWRS)	1296.00	144.00	0.00	0.00	0.00
Hydrobins	0.00	0.00	0.00	2717.00	302.00
Ash dyke buttressing/ raising and other related works	0.00	0.00	0.00	0.00	780.50
Up-gradation of DCS Controller and HMI	0.00	815.00	0.00	0.00	0.00
De-capitalization for DCS Controller and HMI (assumed deletion)	0.00	(-) 373.36	0.00	0.00	0.00





CLO2 system	0.00	0.00	0.00	0.00	0.00
<b>Net additional capital expenditure allowed</b>	<b>1296.00</b>	<b>585.64</b>	<b>0.00</b>	<b>2717.00</b>	<b>1082.50</b>

26. Further, the entire additional capital expenditure as admitted above is eligible for return on equity at normal rate of ROE.

### **Capital cost allowed for the 2019-24 tariff period**

27. Accordingly, the capital cost allowed for the purpose of tariff for the 2019-24 tariff period is as under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	157587.03	158883.03	159468.67	159468.67	162185.67
Add: Admitted additional capital expenditure	1296.00	585.64	0.00	2717.00	1082.50
<b>Closing Capital Cost</b>	<b>158883.03</b>	<b>159468.67</b>	<b>159468.67</b>	<b>162185.67</b>	<b>163268.17</b>
Average Capital Cost	158235.03	159175.85	159468.67	160827.17	162726.92

### **Debt–Equity ratio**

28. Regulation 18 of the 2019 Tariff Regulations 2019 provides as under:

*(1) For new projects the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost equity in excess of 30% shall be treated as normative loan:*

*Provided that:*

*(i) where equity actually deployed is less than 30% of the capital cost actual equity shall be considered for determination of tariff:*

*(ii) the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*

*(iii) any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.*

**Explanation** - *The premium if any raised by the generating company or the transmission licensee as the case may be while issuing share capital and investment of internal resources created out of its free reserve for the funding of the project shall be reckoned as paid up capital for the purpose of computing return on equity only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.*

*(2) The generating company or the transmission licensee as the case may be shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system as the case may be.*

*(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019 debt:*



*equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:*

*Provided that in case of a generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019 if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost equity in excess of 30% shall not be taken into account for tariff computation;*

*Provided further that in case of projects owned by Damodar Valley Corporation the debt: equity ratio shall be governed as per sub-clause (ii) of clause (2) of Regulation 72 of these regulations.*

*(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019 but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019 the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.*

*(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.*

29. The gross loan and equity amounting to Rs.110310.92 lakh and Rs.47276.11 lakh respectively, as on 31.3.2019, was considered in order dated 25.9.2021 in Petition No. 220/GT/2020. The proportionate equity as a percentage of the admitted capital cost as on 31.3.2019 is 30%. Accordingly, the gross loan and equity amounting to Rs.110310.92 lakh and Rs.47276.11 lakh respectively has been considered as the gross loan and equity as on 1.4.2019. The admitted additional capital expenditure has been considered in the ratio of 70:30. This is, however, subject to revision at the time of truing up of tariff.

### **Return on Equity**

30. Regulation 30 of the 2019 Tariff Regulations provides as under:

*(1) Return on equity shall be computed in rupee terms on the equity base determined in accordance with Regulation 18 of these regulations.*

*(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations transmission system including communication system and run of river hydro generating station and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:*

*Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;*



*Provided further that:*

*(i) In case of a new project the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO) data telemetry communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;*

*(ii) in case of existing generating station as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;*

*(iii) in case of a thermal generating station with effect from 1.4.2020:*

*a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;*

*b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute subject to ceiling of additional rate of return on equity of 1.00%:*

*Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.*

31. Regulation 31 of the 2019 Tariff Regulations provides as under:

*“31. Tax on Return on Equity:*

*(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission as the case may be) shall be excluded for the calculation of effective tax rate.*

*(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:*

*Rate of pre-tax return on equity = Base rate / (1-t)*

*Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business as the case may be and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT) “t” shall be considered as MAT rate including surcharge and cess.*

***Illustration-***

*(i) In case of the generating company or the transmission licensee paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess:*

*Rate of return on equity = 15.50/(1-0.2155) = 19.758%*

*(ii) In case of a generating company or the transmission licensee paying normal corporate tax including surcharge and cess:*



(a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1000 crore;

(b) Estimated Advance Tax for the year on above is Rs 240 crore;

(c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;

(d) Rate of return on equity =  $15.50 / (1 - 0.24) = 20.395\%$ .

(3) The generating company or the transmission licensee as the case may be shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However penalty if any arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up shall be recovered or refunded to beneficiaries or the long term transmission customers as the case may be on year to year basis.

32. The Petitioner has claimed Return on Equity (ROE) at 18.782% considering the base rate of 15.50% and MAT rate as effective tax rate of 17.472% for the period from 1.4.2019 to 31.3.2024. The same has been considered for the purpose of tariff, subject to truing up. Accordingly, ROE has been worked out as under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Notional Equity - Opening	47276.11	47664.91	47840.60	47840.60	48655.70
Addition of Equity due to additional capital expenditure	388.80	175.69	0.00	815.10	324.75
Normative Equity - Closing	47664.91	47840.60	47840.60	48655.70	48980.45
Average Normative Equity	47470.51	47752.76	47840.60	48248.15	48818.08
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate for respective years	17.472%	17.472%	17.472%	17.472%	17.472%
Rate of Return on Equity (Pre Tax)	18.782%	18.782%	18.782%	18.782%	18.782%
<b>Return on Equity (Pre Tax)- (annualized)</b>	<b>8915.91</b>	<b>8968.92</b>	<b>8985.42</b>	<b>9061.97</b>	<b>9169.01</b>

### Interest on loan

33. Regulation 32 of the 2019 Tariff Regulations provides as under:

32. Interest on loan capital:

(1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.



*(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.*

*(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*

*(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*

*Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered;*

*Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*

*(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*

*(7) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.*

34. The interest on loan has been worked out as mentioned below:

i) The gross normative loan amounting to Rs.110310.92 lakh has been considered as on 1.4.2019;

ii) Cumulative repayment amounting to Rs.109785.47 lakh as on 31.3.2019 as considered in order dated 25.9.2021 in Petition No. 220/GT/2020 has been considered as on 1.4.2019;

iii) Accordingly, the net normative opening loan as on 1.4.2019 works out to Rs.525.45 lakh;

iv) Addition to normative loan on account of additional capital expenditure approved above has been considered;

v) Depreciation allowed has been considered as repayment of normative loan during the respective year of the 2019-24 tariff period;

vi) The Petitioner has claimed interest on loan by applying the weighted average rate of interest of 8.8571% for 2019-20, 8.9829% for 2020-21, 9.0640% for 2021-22, 9.2762% for 2022-23 and 9.6004% for 2023-24. The weighted average rate of interest for the period 2019-23, as claimed by the Petitioner has been considered. However, for the year 2023-24, the weighted average rate of interest of 9.5982% has been considered for the purpose of tariff.

35. Necessary calculations for interest on loan is as shown below:





(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Gross opening loan	110310.92	111218.12	111628.07	111628.07	113529.97
Cumulative repayment of loan up to previous year / period	109785.47	111218.12	111628.07	111628.07	113529.97
Net Loan Opening	525.45	0.00	0.00	0.00	0.00
Addition due to additional capital expenditure	907.20	409.95	0.00	1901.90	757.75
Repayment of loan during the year	1432.65	671.30	0.00	1901.90	757.75
Less: Repayment adjustment on account of de-capitalization	0.00	261.35	0.00	0.00	0.00
Net Repayment of loan during the year	1432.65	409.95	0.00	1901.90	757.75
Net Loan Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	262.73	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	8.8571%	8.9829%	9.0640%	9.2762%	9.5982%
<b>Interest on Loan</b>	<b>23.27</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

### Depreciation

36. Regulation 33 of the 2019 Tariff Regulations provides as under:

*“33. Depreciation:*

*(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:*

*Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system for which single tariff needs to be determined.*

*(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of a transmission system weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year depreciation shall be charged on pro rata basis.*

*(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:*

*Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;*

*Provided further that in case of hydro generating stations the salvage value shall be as provided in the agreement if any signed by the developers with the State Government for development of the generating station:*

*Provided also that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:*



*Provided also that any depreciation disallowed on account of lower availability of the generating station or unit or transmission system as the case may be shall not be allowed to be recovered at a later stage during the useful life or the extended life.*

*(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.*

*(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-I to these regulations for the assets of the generating station and transmission system:*

*Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.*

*(6) In case of the existing projects the balance depreciable value as on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2019 from the gross depreciable value of the assets.*

*(7) The generating company or the transmission licensee as the case may be shall submit the details of proposed capital expenditure five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.*

*(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services.*

37. Accordingly, the cumulative depreciation amounting to Rs.109931.65 lakh as on 31.03.2019 as considered in order dated 25.9.2021 in Petition No. 220/GT/2020 has been retained for the purpose of tariff. Further, the value of freehold land included in the average capital cost has been adjusted while calculating depreciable value for the purpose of tariff. Accordingly, the balance depreciable value (before providing depreciation) for the year 2019-20 works out to Rs.32479.88 lakh. Since as on 1.4.2019 the used life of the generating station (i.e. 14.02 years) is more than 12 years from the COD (25.03.2005), the depreciation shall be calculated by spreading of the remaining depreciable value over remaining useful life. The weighted average rate of depreciation (WAROD) of 1.869% for 2019-20, 1.911% for 2020-21, 1.944% for 2021-22, 2.023% for 2022-23 and 2.150% for 2023-24 has been considered for the purpose of tariff. The calculations for WAROD has been enclosed as Annexure-I to this order Accordingly, depreciation has been calculated and allowed as under:



(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost (A)	157587.03	158883.03	159468.67	159468.67	162185.67
Add: Net additional capital expenditure (Projected) (B)	1296.00	585.64	0.00	2717.00	1082.50
Closing Capital Cost (C) [C = (A+B)]	158883.03	159468.67	159468.67	162185.67	163268.17
Average Capital Cost (D) [D = (A+C)/2]	158235.03	159175.85	159468.67	160827.17	162726.92
Value of freehold land included above (E)	0.00	0.00	0.00	0.00	0.00
Aggregated depreciable value @ 90% (F) [F = (D-E) x 90%]	142411.53	143258.27	143521.81	144744.46	146454.23
Remaining aggregated depreciable value at the beginning of the year (G) [G = F - Cumulative Depreciation (Shown at N) at the end of previous year]	32479.88	30369.42	27855.55	25977.39	24433.22
Number of completed years at the beginning of the year (H)	14.02	15.02	16.02	17.02	18.02
Balance useful life at the beginning of the year (I)	10.98	9.98	8.98	7.98	6.98
Weighted Average Rate of Depreciation (WAROD) (J)	1.869%	1.911%	1.944%	2.023%	2.150%
Combined depreciation during the year (K)	2957.20	3042.01	3100.80	3253.95	3498.79
Cumulative depreciation at the end of the year (before adjustment for de-capitalization) (L) [L = K + Cumulative Depreciation (shown at N) at the end of previous year]	112888.85	115930.86	118767.06	122021.02	125519.81
Less: Depreciation adjustment on account of de-capitalization (M)	0.00	264.60	0.00	0.00	0.00
<b>Cumulative depreciation at the end of the year (N) [N = (L-M)]*</b>	<b>112888.85</b>	<b>115666.26</b>	<b>118767.06</b>	<b>122021.02</b>	<b>125519.81</b>

\*Note: The Cumulative Depreciation at the end of the year 2018-19 is Rs. 109931.65 lakh.

### Operation & Maintenance Expenses

38. Regulation 35(1)(1) of the 2019 Tariff Regulations provides the following O&M expense norms for coal based generating stations of 500 MW capacity.

(Rs. in lakh/MW)

2019-20	2020-21	2021-22	2022-23	2023-24
22.51	23.30	24.12	24.97	25.84





39. The Petitioner has claimed following O&M expenses in Form 3A as under:

	(Rs. n lakh)					
	2019-20	2020-21	2021-22	2022-23	2023-24	Total
O&M Expenses claimed under Regulation 35(1)(1)	11255.00	11650.00	12060.00	12485.00	12920.00	60370
O&M Expenses claimed under Regulation 35(6)						
Water Charges	443.72	488.09	488.09	536.90	536.90	2493.70
Security Expenses	707.12	832.88	824.62	891.54	961.73	4217.89
<b>Total O&amp;M Expenses</b>	<b>12405.84</b>	<b>12970.98</b>	<b>13372.71</b>	<b>13913.44</b>	<b>14418.63</b>	<b>67081.59</b>

40. The Petitioner's claim for normative O&M expenses is in accordance with Regulation 35(1)(1) of the 2019 Tariff Regulations and the same is, therefore, allowed. The Petitioner has also claimed Water Charges and Security Expenses, which are discussed below.

### **Water Charges**

41. The first proviso to Regulation 35(6) of the 2019 Tariff Regulations provides for the claim for Water charges as under:

*"35(6) The Water Charges, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately after prudence check:*

*Provided that water charges shall be allowed based on water consumption depending upon type of plant and type of cooling water system, subject to prudence check. The details regarding the same shall be furnished along with the petition;*

*xxxxxxx."*

42. The actual water charges claimed by the Petitioner in Petition No. 220/GT/2020 for the 2014-19 tariff period and allowed by order dated 25.9.2021 is as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Water Charges claimed in Petition No.220/GT/2020 for the 2014-19 tariff period	351.01	371.33	538.75	378.13	443.72
Water Charges allowed in order dated 25.9.2021 for the 2014-19 tariff period	343.00	355.44	521.76	359.96	428.60

43. The Petitioner has claimed water charges for the 2019-24 tariff period as under:



(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
443.72	488.09	488.09	536.90	536.90

44. The Respondent KSEBL has submitted that the details of the actual water requirement of the generating station along with the past water bills have not been furnished by the Petitioner.

45. In terms of Regulations 35(1)(6) of the 2019 Tariff Regulations, water charges shall be allowed separately, based on the water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details in respect of water charges for the 2019-24 tariff period as furnished by the Petitioner are as under:

Description	Remarks
Type of Plant	Coal
Type of cooling water system	Closed circuit cooling with induced draft cooling tower
Consumption of water	0.477 TMC/year
Rate of water charges	Rs.7.16 Cr/TMC = Rs.716.00 lakh/TMC
Total water charges in 2019-20	Rs.443.72 lakh

46. We have examined the matter. It is observed that the Petitioner has claimed water charges of Rs.443.72 lakh for the year 2019-20, considering the actual water charges for the year 2018-19 as claimed in Petition No. 220/GT/2020. Further, for the years 2020-21 and 2021-22, the Petitioner has claimed Rs.488.09 lakh as water charges and for the years 2022-23 and 2023-24, it has claimed Rs.536.90 lakh as water charges. As regards the rate of water charges, the Petitioner has submitted that it has made payments towards power charges for lifting water as per the State Government notification. The Petitioner vide affidavit dated 4.11.2020 has submitted that the Irrigation Department, Government of Telangana is supplying raw water to the Petitioner from Sripada Yellampalli Project (SYP). It has stated that the water pumping system for the Petitioner was started in August 2012 and since then, water is being supplied to NTPC Reservoir as and when water is available in SYP project as per requirement and accordingly power charges are being paid. The Petitioner



has submitted that prior to August 2012 water supply was from SRSP (Sri Ramsagar Project) which is under natural drift irrigation scheme, for which no power charges were paid.

47. In consideration of the submissions of the Petitioner, we consider the actual water charges of Rs.428.60 lakh allowed for the year 2018-19 in order dated 25.9.2021 in Petition No. 220/GT/2020 and allow the same for the 2019-24 tariff period, with 10% escalation for every two financial years, in line with the State Government of Telangana notification GO. MS. 115 dated 27.8.2015, as furnished by the Petitioner. Accordingly, the water charges allowed for the 2019-24 tariff period are as under:

<i>(Rs. in lakh)</i>				
<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
428.60	428.60	471.46	471.46	518.61

48. The Petitioner is directed to furnish the details of the actual water consumption (in cubic meters), the rate (Rs./cubic meter) and the power charges separately at the time of truing up. The Petitioner shall also furnish the reasons for the variation in the claim, if any, duly supported by documents (i.e. agreement/ direction/ order etc. of the State Government/ statutory authority) with regard to the rate of water charges and power charges separately. The water charges allowed are subject to the truing up, as per actual water charges paid, after prudence check.

### **Security Expenses**

49. The second proviso to Regulation 35(6) of the 2019 Tariff Regulations provides for the claim for Security expenses as under:

*“35(6) The Water Charges, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately after prudence check:*

*xxxx;*

*Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses;*

*Xxxx”*



50. The Petitioner has claimed the following Security expenses:

<i>(Rs. in lakh)</i>				
<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
707.12	832.88	824.62	891.54	961.73

51. The Respondent KSEBL has submitted that the details of security expenses have not been furnished by the Petitioner. The Petitioner has submitted that the total Security expenses, as per audited financial statements of 2018-19 was Rs.3657.00 lakh, for the total generating station of 2600 MW capacity. On apportionment of the same to this generating station, the security expenses work out to Rs.703.27 lakh.

52. The Petitioner has not furnished any justification and assessment with regard to the variation in the claim for security expenses during the 2019-24 tariff period. Considering the fact that the security expenses for thermal generating stations is required to be allowed separately, after prudence check, and that the Petitioner is required to submit the assessment of the security requirement and estimated expenses as per regulations, we, based on the actual security expenses incurred for 2018-19, allow the security expenses claimed for the 2019-24 tariff period, with 5% escalation per year. However, the Petitioner shall, at the time of truing up, furnish the assessment and actual details under each head towards security expenses. Accordingly, the Security expenses allowed are as under:

<i>(Rs. in lakh)</i>				
<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
703.27	738.43	775.35	814.12	854.83

### **Capital Spares**

53. The Petitioner has not claimed any capital spares consumed during the 2019-24 tariff period, but has submitted that the same shall be claimed at the time of truing-up of tariff in terms of the last proviso to Regulation 35(6) of the 2019 Tariff Regulations, based on the actual consumption of spares. Accordingly, the same has not been considered in this order. The claim of the Petitioner, if any, at the time of



truing-up of tariff, shall be considered on merits, after prudence check, in accordance with law.

54. Accordingly, the total O&M expenses, including water charges and Security expenses, as claimed by the Petitioner and allowed for the purpose of tariff are as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses claimed (a)	11255.00	11650.00	12060.00	12485.00	12920.00
<b>O&amp;M Expenses allowed (b)</b>	<b>11255.00</b>	<b>11650.00</b>	<b>12060.00</b>	<b>12485.00</b>	<b>12920.00</b>
Water charges claimed (c)	443.72	488.09	488.09	536.90	536.90
<b>Water charges allowed (d)</b>	<b>428.60</b>	<b>428.60</b>	<b>471.46</b>	<b>471.46</b>	<b>518.60</b>
Security Expenses claimed (e)	707.12	832.88	824.62	891.54	961.73
<b>Security Expenses allowed (f)</b>	<b>703.27</b>	<b>738.43</b>	<b>775.35</b>	<b>814.12</b>	<b>854.83</b>
Total O&M expenses claimed (a + c + e)	12405.84	12970.98	13372.71	13913.44	14418.63
<b>Total O&amp;M expenses allowed (b + d + f)</b>	<b>12386.87</b>	<b>12817.03</b>	<b>13306.81</b>	<b>13770.58</b>	<b>14293.43</b>

#### **Additional Expenditure for Emission Control System**

55. The Petitioner has submitted that it is in the process of installing Emission Control Systems (ECS) in compliance to the revised Emission Standards as notified by MOEF&CC vide notification dated 7.12.2015, as amended. It has submitted that the completion of these schemes in compliance to the revised emission norms will affect the Auxiliary Power Consumption, Heat Rate, and O&M expenses etc. In addition, the Petitioner has submitted that the availability of the unit/ station would also be affected due to shutdown of the units for installation of ECS. The Petitioner has also submitted that it would be filing the details of the same in a separate petition in terms of Regulation 29 of the 2019 Tariff Regulations. It is however noticed that the Petitioner had filed Petition No. 612/MP/2020, for approval of additional expenditure on installation of various Emission Control Systems at this generating station, in compliance of MOEF&CC notification dated 7.12.2015 and the Commission by a common order dated 30.9.2021 had disposed of the said petition, with certain observations. The claim of the Petitioner for additional expenditure on



emission control system shall therefore be guided by the order dated 30.9.2021 in Petition No. 612/MP/2020.

### **Additional Expenditure towards Fly Ash Transportation**

56. The Petitioner has submitted that MOEF&CC vide notification dated 25.1.2016 in terms of the provisions of Environment (Protection) Act, 1986, has prescribed the transportation cost of fly ash generated at power stations. In this regard, the Petitioner had filed Petition No.172/MP/2016 before this Commission, seeking reimbursement of the additional expenditure incurred for Fly Ash Transportation directly from the beneficiaries as the same was in the nature of statutory expenses. The Petitioner has submitted that it has claimed additional expenditure towards 'fly ash transportation charges' for the years 2017-18 and 2018-19, in various petitions for truing up of tariff of generating stations for the 2014-19 tariff period. It has further submitted vide affidavit dated 15.5.2021, that the expenditure incurred towards fly ash transportation are recurring in nature and that the Petitioner has been incurring the same in some of its generating stations during the 2019-24 tariff period also. The Petitioner has submitted that in case these charges are permitted to be recovered at the end of the 2019-24 tariff period, there will be additional liability on the beneficiaries on account of interest payment for the period till the time the petitions for truing-up of tariff for the 2019-24 tariff period is decided. Accordingly, the Petitioner has submitted that to avoid the interest payment liability of the beneficiaries, it may be allowed to recover/ pass on the fly ash transportation charges, after adjusting the revenue earned from the sale of fly ash at the end of each quarter of the financial year, subject to truing-up at the end of the 2019-24 tariff period. It has submitted that billing & recovery of Ash transportation charges provisionally, on a monthly basis, may be allowed, based on self-certification and the recovery shall be subject to truing up at the end of financial year, based on auditor's



certificate. The Petitioner has added that the issue of monthly recovery and the procedure for recovery of costs is no more res-integra, as this Commission in its order dated 22.3.2021, in Petition No. 405/MP/2019 (*GKEL & Anr. v. DHBVNL & Ors*) had devised a mechanism for the generator therein, to recover future expenditure incurred on transportation of fly ash, wherein the Commission has directed recovery of expenditure on transportation of fly ash on a monthly basis, with reconciliation on an annual basis. The Petitioner has prayed that a similar procedure may also be made applicable in the case of the Petitioner.

57. The Respondent KSEBL has submitted that the Commission vide its order dated 5.11.2018 in Petition No.172/MP/2016 had granted liberty to the Petitioner to approach the Commission at the time of revision of tariff, based on all details/information, duly certified by the auditor. It has submitted that since the matter is already decided, the request of the Petitioner to recover the additional expenditure for fly ash transportation at the end of each quarter of the financial year may be rejected. The Respondent, TANGEDCO has submitted that for considering the fly ash transportation expenses, the Petitioner has to submit the details of bidding process, actual additional expenditure incurred on fly ash transportation after 25.1.2016, revenue generated etc. Accordingly, the Respondent has submitted that the claim of the Petitioner for fly ash transportation charges may be rejected.

58. We have examined the matter. The Commission vide its order dated 5.11.2018 in Petition No.172/MP/2016 had decided that the MOEF&CC notification dated 25.1.2016 amending the earlier notification dated 14.9.1999 issued under Environment ( Protection ) Rules, 1986 as 'change in law' and had disposed of the said petition vide order dated 5.11.2018 as under:

*"31. Accordingly, we in exercise of the regulatory power hold that the actual additional expenditure incurred by the Petitioner towards transportation of ash in terms of the MOEF&CCCC Notification is admissible under "Change in Law" as*



additional O&M expenses. However, the admissibility of the claims is subject to prudence check of the following conditions on case to case basis for each station:

a) Award of fly ash transportation contract through a transparent competitive bidding procedure. Alternatively, the schedule rates of the respective State Governments, as applicable for transportation of fly ash.

b) Details of the actual additional expenditure incurred on Ash transportation after 25.1.2016, duly certified by auditors.

c) Details of the Revenue generated from sale of fly ash/ fly ash products and the expenditure incurred towards Ash utilisation up to 25.1.2016 and from 25.1.2016 to till date, separately.

d) Revenue generated from fly Ash sales maintained in a separate account as per the MOEF&CC notification.

32. The Petitioner is granted liberty to approach the Commission at the time of revision of tariff of the generating stations based on trueing –up exercise for the period 2014-19 in terms of Regulation 8 of the 2014 Tariff Regulations along with all details / information, duly certified by auditor.”

59. We however note that the Petitioner has filed Petition No. 205/MP/2021 seeking reimbursement of fly ash transportation charges in respect of its generating stations. The Petitioner has raised similar issues with regard to fly ash transportation in that petition arguing higher liability of the Respondents therein on account of interest burden and cash flow issues that may be faced by the Petitioner. Some of the Respondents therein (including TANGEDCO) have raised issues on ‘maintainability’ of Petition No. 205/MP/2021, and the Commission, after hearing the parties on 12.10.2021, has issued notices for hearing on ‘admissibility’ of that petition. Therefore, we are not deciding this issue in this Petition. The reimbursement of charges towards transportation of fly ash shall, therefore, be governed by the decision of the Commission in Petition No. 205/MP/2021.

### **Operational Norms**

60. The Petitioner in Form-3, has considered the following norms of operation for the purpose of tariff:

Normative Annual Plant Availability Factor (NAPAF) (%)	85
Gross Station Heat Rate (kcal/kwh)	2390
Auxiliary Power Consumption (%)	6.25
Specific Oil Consumption (ml/kwh)	0.50





## **Normative Annual Plant Availability Factor**

61. Regulation 49 of the 2019 Tariff Regulations provides as under:

*“(A) Normative Annual Plant Availability Factor (NAPAF)*

*(a) For all thermal generating stations, except those covered under clauses (b), (c), (d), & (e) - 85%”*

62. The Petitioner has considered the Normative Annual Plant Availability Factor (NAPAF) of 85% during the 2019-24 tariff period in terms of Regulation 49(A)(a) of the 2019 Tariff Regulations. Hence, the same is allowed.

## **Gross Station Heat Rate**

63. Regulation 49(C)(a)(1) of 2019 Tariff Regulations provides as under:

*“(C) Gross Station Heat Rate:*

*(a) Existing Thermal Generating Stations*

*(i) For existing Coal-based Thermal Generating Stations, other than those covered under clauses (ii) and (iii) below:*

<b>200/210/250 MW Sets</b>	<b>500 MW Sets (Sub-critical)</b>
2430kCal/kWh	2390kCal/kWh

64. The Gross Station Heat Rate of 2390 kCal/kWh, as claimed by the Petitioner, for existing coal based thermal generating stations of 500 MW, is as per provisions of Regulation 49(C)(a)(1) of 2019 Tariff Regulations and, hence, the same is allowed.

## **Auxiliary Power Consumption**

65. Regulation 49(E)(a)(ii) of the 2019 Tariff Regulations provides for auxiliary power consumption as under:

*“(E) Auxiliary Energy Consumption*

*(a) Coal-based generating stations except at (b) below:*

	<i>With Natural Draft cooling tower or without cooling tower</i>
<i>(i) 200 MW series</i>	8.5%
<i>(ii) 300 MW and above</i>	
<i>Steam driven boiler feed pumps</i>	5.75%
<i>Electrically driven boiler feed pumps</i>	8.0%

*Provided that for thermal generating stations with induced draft cooling towers and where tube type coal mill is used, the norms shall be further increased by 0.5% and 0.8% respectively”*



66. As the generating station with a capacity of 500 MW, falls under the category of 300 MW & above, having Steam-driven Boiler Feed Pumps & Induced Draft Cooling Tower, the generating station qualifies for a normative Auxiliary Power Consumption of 6.25% (5.75% for Units having Steam-driven BFP & additional 0.50% for having Induced Draft Cooling Tower). Accordingly, the normative Auxiliary Power Consumption of 6.25% as considered by the Petitioner is allowed.

### **Specific Oil Consumption**

67. Regulation 49(D)(a) of 2019 Tariff Regulations, provides for a Secondary fuel oil consumption of 0.50 ml/kWh for coal-based generating stations. Hence, the Secondary fuel oil Consumption as considered by the Petitioner is allowed.

68. Based on the above, the operational norms for the generating station as considered by the Petitioner as in paragraph 60 above is considered for the purpose of tariff.

### **Interest on Working capital**

69. Sub-section (a) of clause (1) of Regulation 34 of the 2019 Tariff Regulations provides as under:

*“34 Interest on Working Capital:*

*(1) the working capital shall cover:*

*(a) For Coal-based/lignite-fired thermal generating stations*

*(i) Cost of coal or lignite and limestone towards stock, if applicable, for 10 days for pit-head generating stations and 20 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower;*

*(ii) Advance payment for 30 days towards cost of coal or lignite and limestone for generation corresponding to the normative annual plant availability factor;*

*(iii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;*

*(iv) Maintenance spares @ 20% of operation and maintenance expenses including water charges and security expenses;*



(v) *Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on the normative annual plant availability factor; and*

(vi) *Operation and maintenance expenses, including water charges and security expenses, for one month.*

Xxxxxx

*(2) The cost of fuel in cases covered under sub-clauses (a) and (b) of clause (1) of this Regulation shall be based on the landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) by the generating station and gross calorific value of the fuel as per actual weighted average for the third quarter of preceding financial year in case of each financial year for which tariff is to be determined:*

*Provided that in case of new generating station the cost of fuel for the first financial year shall be considered based on landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) and gross calorific value of the fuel as per actual weighted average for three months as used for infirm power preceding date of commercial operation for which tariff is to be determined.*

*(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof as the case may be is declared under commercial operation whichever is later.*

*Provided that in case of truing-up the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.*

*(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency.*

### **Fuel Components and Energy Charges in working capital**

70. The Petitioner has claimed the cost for fuel component in working capital and Energy Charge Rate (ECR) based on:

- a) Operational norms as per the 2019 Tariff Regulations;
- b) Price and 'as received' GCV of coal {after reducing the same by 85 kcal/kWh in terms of Regulation 43(2)(b) of the 2019 Tariff Regulations} procured for the three months of October 2018, November 2018, and December 2018; and
- c) Price and GCV of secondary fuel oil for the three months of October 2018, November 2018 and December 2018.

71. Accordingly, the Petitioner has claimed ECR of 258.231 paise/kWh and fuel component in working capital as under:



	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Working capital as coal cost for 50 days	12249.86	12249.86	12249.86	12249.86	12249.86
Cost of Secondary fuel oil 2 months	118.08	117.76	117.76	117.76	118.08

72. It is observed that the Petitioner, in Form-15, had not initially furnished the opening stock of coal and coal received during the months of October 2018, November 2018, and December 2018 separately. Therefore, the Commission vide ROP of the hearing dated 13.8.2020 had directed the Petitioner to submit the details of the coal quantity received at the generating station (excluding the coal stock as on 30.9.2018) during the months of October 2018, November 2018 and December 2018 in Form-15. However, the Petitioner vide affidavit dated 5.11.2020, has furnished only the details of coal quantity received for the months of October 2018, November 2018 and December 2018.

73. On perusal of the data furnished by the Petitioner, it is observed that the Petitioner has not included the previous stock of coal for the month October 2018. However, the Petitioner has considered the opening stock of coal for the months of November 2018 and December 2018 (closing stock of the coal for the previous months). In terms of the regulations, the computation of ECR and associated fuel components in working capital, is based on the landed price and GCV of fuel, which means that the 'fuel received' during these three months, is only to be considered, without the opening stock. Accordingly, after excluding the opening stock and its value, we have computed the weighted average landed cost and weighted average GCV of coal, for calculating the fuel component in working capital, for the months of October 2018, November 2018 and December 2018. It is further observed that the Petitioner has claimed the cost of coal towards stock of 20 days (one of the components of working capital) which is applicable to non-pit head stations, whereas,



this generating station is a pit head station, for which cost of coal for 10 days stock only is allowable as per Regulation 34(1)(a)(i) of the 2019 Tariff Regulations. Accordingly, based on the revised GCV of coal (further reduced by a margin of 85 kCal/kg for storage losses) and the revised price of landed coal and the cost and GCV of oil as furnished, the fuel components in working capital are allowed as under:

	<i>(Rs. in lakh)</i>	
	<b>2019-20 and 2023-24</b>	<b>2020-21 to 2022-23</b>
Cost of 50 days coal (claimed) (a)	12249.86	12249.86
Cost of Coal for 10 days towards stock (allowed) (b)	2451.74	2451.74
Advance payment for 30 days towards cost of coal (allowed) (c)	7355.21	7355.21
Cost of coal for 40 days (allowed) (b)+(c)	9806.94	9806.94
Cost of Secondary fuel oil 2 months (claimed)	118.08	117.76
Cost of Secondary fuel oil 2 months (allowed)	118.08	117.76

### Energy Charge Rate (ECR)

74. The Petitioner has claimed ECR (ex-bus) for Rs.2.582/kWh based on the weighted average price, GCV of coal & oil procured and burnt for the preceding three months of October 2018, November 2018 and December 2018. ECR as worked out based on operational norms specified under the 2019 Tariff Regulations and on “as received” GCV of coal for the preceding three months i.e. October 2018 to December 2018, as given below has been considered for allowing 45 days energy charge in working capital:

Description	Unit	2019-20 and 2023-24	2020-21 to 2022-23
Capacity	MW	500	500
Gross Station Heat Rate	Kcal/kWh	2390	2390
Aux. Energy Consumption	%	6.25	6.25
Weighted average GCV of oil	Kcal/lit	9870	9870
Weighted average GCV of coal	Kcal/kg	3624.33 (3709.33-85)	3624.33 (3709.33-85)
Weighted average price of oil	Rs./KL	37955.05	37955.05
Weighted average price of Coal	Rs./MT	3652.59	3652.59
<b>Rate of energy charge ex-bus</b>	<b>Rs./kWh</b>	<b>2.584</b>	<b>2.584</b>

75. The Energy Charges for 45 days is computed as under:



<i>(Rs. in lakh)</i>	
<b>2019-20 and 2023-24</b>	<b>2020-21 to 2022-23</b>
11119.274	11119.275

76. Therefore, the fuel component and energy charges allowed in working capital are as under:

<i>(Rs. in lakh)</i>		
	<b>2019-20 and 2023-24</b>	<b>2020-21 to 2022-23</b>
Cost of Coal for 40 days	9806.94	9806.94
Cost of Secondary fuel oil for 2 months	118.08	117.76
Energy charges for 45 days	11119.28	11119.28

77. As per Regulation 34(2) of the 2019 Tariff Regulations, the cost of coal shall be based on landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of the 2019 Tariff Regulations) by the generating station and GCV of fuel as per the actual weighted average for the third quarter of preceding financial year. Hence, the Petitioner shall, at the time of truing up, furnish the details of quantity of coal as per Regulation 34(2) of 2019 Tariff Regulations. The Petitioner shall not alter or modify any of the column and lines provided in the forms/ annexures and shall submit the details strictly in accordance with the said forms/ annexures of the 2019 Tariff Regulations.

78. The Petitioner, on a month to month basis, shall compute and claim the energy charges from the beneficiaries based on the formulae as per Regulation 43 of the 2019 Tariff Regulations.

### **Working Capital for O&M expenses**

79. The O&M expenses for 1 month claimed by the Petitioner for the purpose of working capital, including water charges and security expenses are as follows:

<i>(Rs. in lakh)</i>				
<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
1033.82	1080.91	1114.39	1159.45	1201.55



80. Regulation 34(a)(vi) of 2019 Tariff Regulations provides for O&M expenses for one month for coal-based generating stations, including water charges and security expenses. Hence, the Petitioner is allowed the following O&M expenses for 1 month based on the O&M expenses, including the water charges and security expenses allowed as above:

<i>(Rs. in lakh)</i>				
<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
1032.24	1068.09	1108.90	1147.55	1191.12

### **Working Capital for Maintenance spares**

81. Regulation 34(a)(iv) of the 2019 Tariff Regulations provides for maintenance spares @ 20% of the operation & maintenance expenses, including water charges and security expenses. Accordingly, maintenance spares is allowed as under:

<i>(Rs. in lakh)</i>				
<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
2477.37	2563.41	2661.36	2754.12	2858.69

82. The difference in the claim for 'maintenance spares' and 'O&M expenses for one month' against those allowed is on account of the fact that the 'water charges' and 'security expenses' allowed in this order varies with those claimed by the Petitioner for the reasons mentioned therein.

### **Working Capital for Receivables**

83. Receivables equivalent to 45 days of capacity charge and energy charges has been worked out as under:

<i>(Rs. in lakh)</i>					
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Variable Charges - for 45 days	11119.28	11119.28	11119.28	11119.28	11119.28
Fixed Charges - for 45 days	3399.80	3451.09	3497.14	3585.49	3686.46
<b>Total</b>	<b>14519.07</b>	<b>14570.37</b>	<b>14616.42</b>	<b>14704.76</b>	<b>14805.73</b>

84. In line with Regulation 34(4) of the 2019 Tariff Regulations, the rate of interest on working capital has been considered as 12.05% (i.e. 1 year SBI MCLR of 8.55% (as on 01.04.2019) + 350 bps) for the year 2019-20 11.25% (i.e. 1 year SBI MCLR of





7.75% (as on 01.04.2020) + 350 bps) for the year 2020-21 and 10.50% (i.e. 1 year SBI MCLR of 7.00% (as on 01.04.2021) + 350 bps) for the period 2021-24.

Accordingly, the interest on working capital has been considered as 12.05% for 2019-20 11.25% for 2020-21 and 10.50% for the period 2021-22 to 2023-24.

Accordingly, interest on working capital is worked out and allowed as under:

	<i>(Rs, in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Working Capital for Cost of Coal towards stock – 10 days of generation	2451.74	2451.74	2451.74	2451.74	2451.74
Working Capital for advance payment towards Cost of Coal – 30 days of generation	7355.21	7355.21	7355.21	7355.21	7355.21
Working Capital for Cost of Secondary Fuel Oil – 2 months of generation	118.08	117.76	117.76	117.76	118.08
Working Capital for Maintenance Spares -- 20% of O&M expenses	2477.37	2563.41	2661.36	2754.12	2858.69
Working Capital for Receivables – 45 days of capacity charge and energy charges	14519.07	14570.37	14616.42	14704.76	14805.73
Working Capital for O&M expenses – 1 month of O&M expenses	1032.24	1068.09	1108.90	1147.55	1191.12
<b>Total Working Capital</b>	<b>27953.70</b>	<b>28126.56</b>	<b>28311.38</b>	<b>28531.12</b>	<b>28780.56</b>
Rate of Interest	12.05%	11.25%	10.50%	10.50%	10.50%
<b>Interest on Working Capital</b>	<b>3368.42</b>	<b>3164.24</b>	<b>2972.69</b>	<b>2995.77</b>	<b>3021.96</b>

### **Annual Fixed Charges**

85. Accordingly, the annual fixed charges approved for the generating station for the 2019-24 tariff period is summarised as under:

	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	2957.20	3042.01	3100.80	3253.95	3498.79
Interest on Loan	23.27	0.00	0.00	0.00	0.00
Return on Equity	8915.91	8968.92	8985.42	9061.97	9169.01
Interest on Working Capital	3368.42	3164.24	2972.69	2995.77	3021.96
O&M Expenses	12386.87	12817.03	13306.81	13770.58	14293.43
<b>Total</b>	<b>27651.67</b>	<b>27992.20</b>	<b>28365.73</b>	<b>29082.27</b>	<b>29983.20</b>

**Note:** All figures are on annualised basis. All figures under each head have been rounded. The figure in total column in each year is also rounded. As such the sum of individual items may not be equal to the arithmetic total of the column.





86. The annual fixed charges approved as above, is subject to truing up in terms of Regulation 13 of the 2019 Tariff Regulations.

**Application Fee and Publication expenses**

87. The Petitioner has sought reimbursement of fee paid by it for filing the petition for the 2019-24 tariff period and for publication expenses. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries, on pro-rata basis, in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

88. Annexure-I enclosed shall form part of this order.

89. Petition No. 444/GT/2020 is disposed of in terms of the above.

**Sd/-**  
**(Arun Goyal)**  
**Member**

**Sd/-**  
**(I.S Jha)**  
**Member**

**Sd/-**  
**(P.K. Pujari)**  
**Chairperson**



## Annexure-I

### Weighted Average Rate of Depreciation for the 2019-24 tariff period

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost (A)	157587.03	158883.03	159468.67	159468.67	162185.67
Net Addition during the year/ period (B)	1296.00	585.64	0.00	2717.00	1082.50
Closing Capital Cost (C) [C = (A+B)]	158883.03	159468.67	159468.67	162185.67	163268.17
Average Capital Cost (D) [D = (A+C)/2]	158235.03	159175.85	159468.67	160827.17	162726.92
Remaining Depreciable Value (E)	32479.88	30369.42	27855.55	25977.39	24433.22
Balance Useful life of the plant (in years) (F)	10.98	9.98	8.98	7.98	6.98
Depreciation for the period (G) [G = (E/F)]	2957.20	3042.01	3100.80	3253.95	3498.79
<b>Effective Weightage Average Rate of Depreciation (H)</b> [H = (G/D)]	1.869%	1.911%	1.944%	2.023%	2.150%



**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 270/GT/2014**

**Coram:**

**Shri Gireesh. B. Pradhan, Chairperson**

**Shri A.K.Singhal, Member**

**Shri A.S. Bakshi, Member**

**Dr. M.K. Iyer, Member**

**Date of Order: 27.06.2016**

**IN THE MATTER OF**

Approval of tariff of Simhadri Super Thermal Power Station Stage-I (1000MW) for the period from 1.4.2014 to 31.3.2019

**AND**

**IN THE MATTER OF**

NTPC Ltd  
NTPC Bhawan,  
Core-7, SCOPE Complex,  
7, Institutional Area, Lodhi Road,  
New Delhi-110003

**...Petitioner**

**Vs**

1. Andhra Pradesh Eastern Power Distribution Company Ltd  
Corporate Office P&T Colony, Seethammadhara,  
Visakhapatnam-530013-(AP)

2. Andhra Pradesh Southern Power Distribution Company Ltd,  
Corporate Office, Back side Srinivasa Kalyana Mandapam  
Tiruchhanur Road, Kesavayana Gunta,  
Tirupati-517503-(AP)

3. Telangana State Southern Power Distribution Company Ltd  
Mint Compound, Corporate Office,  
Hyderabad-500 063

4. Telangana State Northern Power Distribution Company Ltd  
H.No 2-5-31/2, Vidyut Bhawan  
Nakkalagutta, Hanamkonda, Warangal-506001

**...Respondents**

**Parties present:**

Shri M.G. Ramachandran, Advocate, NTPC  
Ms. Poorva Saigal, Advocate, NTPC  
Shri Shubham Arya, Advocate, NTPC  
Shri Ajay Dua, NTPC  
Shri Abhay Anand, NTPC  
Shri Shankar Saran, NTPC  
Shri A.K. Bishoi, NTPC  
Shri A. Basu Roy, NTPC



Shri S.R. Sarangi, NTPC  
 Shri A. K. Halder, NTPC  
 Shri Bhupinder Kumar, NTPC  
 Shri K.K. Shah, NTPC  
 Shri Vivek Kumar, NTPC  
 Shri T. Vinod, NTPC  
 Shri B.S. Rajput, NTPC  
 Shri Rohit Chhabra, NTPC  
 Shri Navneet Goel, NTPC  
 Shri Nishant Goel, NTPC  
 Shri Somes Bandopadhyay, NTPC

## ORDER

The present petition has been filed by the petitioner, NTPC for approval of tariff of Simhadri Super Thermal Power Station, Stage-I (2 x 500 MW) (hereinafter referred to as “the generating station”) for the period 20014-19 in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”).

2. The generating station with a capacity of 1000 MW comprises of two units of 500 MW each. Unit-I of the generating station was declared under commercial operation on 1.9.2002 and Unit-II on 1.3.2003.

3. The Commission vide order dated 2.11.2015 in Petition No. 304/GT/2014 had revised the tariff of the generating station for the period 2009-14 after final true-up of the additional capital expenditure in terms of Regulation 6 (1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 considering the capital cost of ₹353306.58 lakh as on 31.3.2014 on cash basis and after deduction of un-discharged liabilities of ₹5628.35 lakh as on 1.4.2009. The annual fixed charges approved by the said order dated 2.11.2015 was as under:

	<i>(₹ in lakh)</i>				
	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Return on Equity	24382.28	24081.89	23899.96	24054.85	24781.13
Interest on Loan	6402.89	5851.67	5331.73	4828.28	4323.84
Depreciation	17390.14	17348.31	17435.25	17600.24	17691.74
Interest on Working Capital	6587.82	6610.84	6655.77	6685.36	6744.54
O&M Expenses	13000.00	13740.00	14530.00	15360.00	16240.00
Cost of secondary fuel oil	1841.11	1841.11	1846.16	1841.11	1841.11
Compensation Allowance	0.00	0.00	0.00	0.00	150.00
<b>Total</b>	<b>69604.23</b>	<b>69473.82</b>	<b>69698.87</b>	<b>70369.83</b>	<b>71772.36</b>



4. The petitioner in this petition filed vide affidavit dated on 13.8.2014 has sought the approval of tariff in accordance with the provisions of the 2014 Tariff Regulations. Accordingly, the capital cost and the annual fixed charges claimed by the petitioner for the period 2014-19 in this petition are as under:

#### Capital Cost

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	353851.62	359488.62	363108.62	364514.62	365638.62
Add: Additional Capital Expenditure	5637.00	3620.00	1406.00	1124.00	2783.00
<b>Closing Capital Cost</b>	<b>359488.62</b>	<b>363108.62</b>	<b>364514.62</b>	<b>365638.62</b>	<b>368421.62</b>
Average Capital Cost	356670.12	361298.62	363811.62	365076.62	367030.12

#### Annual Fixed Charges

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	17945.14	11025.80	11219.77	11326.57	11508.57
Interest on Loan	3847.94	3493.12	3197.47	2869.76	2552.79
Return on Equity	21805.19	22088.16	22241.79	22319.13	22438.56
Interest on Working Capital	10671.29	10598.89	10645.12	10715.01	10792.35
O&M Expenses	16526.32	17569.74	18675.28	19853.09	21103.29
Compensation Allowance	200.00	200.00	200.00	200.00	500.00
<b>Total</b>	<b>70995.89</b>	<b>64975.70</b>	<b>66179.43</b>	<b>67283.56</b>	<b>68895.56</b>

5. The petitioner has filed additional information in compliance with the directions of the Commission. None of the respondents have filed reply in the matter. We now proceed to examine the claim of the petitioner, on prudence check, based on the submissions and the documents available on records as stated in the subsequent paragraphs.

#### Capital Cost as on 1.4.2009

6. Clause 3 of Regulation 9 of the 2014 Tariff Regulations provides as under:

*“The Capital cost of an existing project shall include the following:*

- (a) *the capital cost admitted by the Commission prior to 1.4.2014 duly tured up by excluding liability, if any, as on 1.4.2014;*
- (b) *additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and*
- (c) *expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”*

7. The annual fixed charges claimed in the petition is based on opening capital cost of ₹353851.62 lakh as on 1.4.2014, as against ₹353306.58 lakh as on 31.3.2014 as admitted by the



Commission vide order dated 2.11.2015 in Petition No. 304/GT/2014. Further, the petitioner vide affidavit dated 13.8.2014 has furnished the value of capital cost and liabilities as on 1.4.2014 as per books of accounts in Form-9E. The details of liabilities and capital cost have been reconciled with the information available with the records of the Commission as under:

	(₹ in lakh)	
	As per Form-9E	As per records of Commission
Capital cost as on 1.4.2014 as per books	396269.56	396269.56
Liabilities included in the above	5857.08	5857.08

8. It is evident from the above that there is no variation in the capital cost and liabilities position as on 1.4.2014 as per the books and details available with the Commission. Further, out of the total liabilities amounting to ₹5857.08 lakh corresponds to approved capital cost of ₹353306.58 lakh (on cash basis) as on 31.3.2014. Accordingly, the opening capital cost to be considered as on 1.4.2014, after removal of un-discharged liabilities works out to ₹353306.58 lakh (on cash basis).

#### **Actual/ Projected Additional Capital Expenditure during 2014-19**

9. Regulation 14 (3) of the 2014 Tariff Regulations, provides as under:

*“14.(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:*

- (i) *Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;*
- (ii) *Change in law or compliance of any existing law;*
- (iii) *Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;*
- (iv) *Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (v) *Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;*
- (vi) *Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*
- (vii) *Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal / lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;*



(viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;

(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolescence of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and

(x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialization of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station:

Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:

Provided further that any capital expenditure other than that of the nature specified above in (i) to (iv) in case of coal/lignite based station shall be met out of compensation allowance:

Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation.”

10. The break-up of the projected additional capital expenditure claimed during 2014-19 is detailed as under:

Sl. No.	Regulations under which claimed	(₹ in lakh)					
		2014-15	2015-16	2016-17	2017-18	2018-19	
1	Raising Ash dyke	14(3)(iv)	2383.00	2300.00	1406.00	1124.00	2783.00
2	Permanent Dust suppression system for Lagoons 1 & 2	14(3)(ii)	400.00	536.00	0.00	0.00	0.00
3	Dry Ash evacuation system	14(3)(ii)	2854.00	504.00	0.00	0.00	0.00
4	Augmentation of Fire Fighting system	14(3)(ii) & 14(3)(iii)	0.00	280.00	0.00	0.00	0.00
			<b>5637.00</b>	<b>3620.00</b>	<b>1406.00</b>	<b>1124.00</b>	<b>2783.00</b>

11. The projected additional capital expenditure claimed by the petitioner has been discussed in the succeeding paragraphs.

### Raising of Ash Dyke

12. The petitioner has claimed ₹2383.00 lakh in 2014-15, ₹2300.00 lakhs in 2015-16, ₹1406.00 lakhs in 2016-17, ₹1124.00 lakh in 2017-18 and ₹2783.00 lakh in 2018-19 towards works of ash dyke



raising consisting of two Lagoons i.e.lagoon-1and lagoon-2. We have examined the matter. It is observed from the submissions of the petitioner that expenditure projected is for planned works related to ash pond/ ash handling system which is of continuous nature during the operational life of generating station and the works claimed are as per the approved scheme under original scope of work. As the expenditure is covered under original scope of works and based on environmental considerations the said expenditure is allowed under Regulation 14(3)(iv) of the 2014 Tariff Regulations for the period 2014-19. However, the petitioner is directed to submit at the time of truing up of tariff, the detail break-up of the activities along with the cost incurred for each work under the Raising of Ash Dyke works, the estimated expenditure envisaged for Ash Handling system/ Ash Dyke Raising in the original scope of work, the actual expenditure incurred as on COD of the generating station and from COD to 2018-19.

#### **Permanent Dust suppression system for Lagoons 1 &2**

13. The petitioner has claimed ₹400.00 lakh in 2014-15 and ₹536.00 lakh in 2015-16 towards Permanent Dust suppression system for Lagoons 1&2 as per the Regulation 14(3)(ii) of the 2014 Tariff Regulations (i.e. change in law or compliance of any existing law). We have considered the submissions. It is observed that this system is being installed as per the norms & guidelines specified by Andhra Pradesh Pollution Control Board vide letter dated 3.10.2013. Hence, the expenditure on permanent dust suppression system for Lagoon 1 & 2 is allowed under Regulations 14(3)(ii) of the 2014 Tariff Regulations. However, the petitioner is directed to submit at the time of truing up of tariff the details of works undertaken along with cost break-up for permanent dust suppression system and the actual data of dust emission compared to norms after installation of dust suppression system.

#### **Dry Ash evacuation system:**

14. The petitioner has claimed ₹2854.00 lakh in 2014-15 and ₹504.00 lakh in 2015-16, for providing pedestals Dry Ash Evacuation System under Regulation 14(3)(ii) of the 2014 Tariff Regulations (i.e. change in law or compliance of any existing law). The petitioner in its justification has submitted that the Commission has allowed ₹3530 lakh vide order dated 27.8.2012 in Petition No. 257/2009 towards this work and Augmentation of the dry Ash evacuation system is as per the





MOEF directions dated 3.11.2009. The petitioner has further submitted that the Work package was awarded on M/S Tecpro in 2010 for erection & commissioning of the DAES work. Due to severe financial crisis position of the agency, resources deployment depleted & work progress turned out to be less than the anticipated. However, continual effort and follow up actions are on to complete the balance works.

15. It is further noticed that the petitioner in Petition No. 304/GT/2014 had submitted that the expenditure of ₹3100 lakh towards DAES was under capital work in progress and the same shall be capitalized during the year 2014-15. Accordingly, the Commission in its order dated 2.11.2015 in Petition No 304/GT/2014 observed that the submission of the petitioner shall be examined in terms of the provisions of the 2014 Tariff Regulations. In view of the above fact, the expenditure on Dry Ash Evacuation System amounting to ₹2854.00 lakh in 2014-15 and ₹504.00 lakh in 2015-16 is allowed under Regulation 14(3)(ii) of 2014 Tariff Regulations.

#### **Augmentation of Fire Fighting system**

16. The petitioner has claimed ₹280.00 lakh in 2015-16 towards augmentation of Fire Fighting system under Regulation 14(3)(ii) and 14(3)(iii) of the 2014 Tariff Regulations. The petitioner in its justification has submitted that the expenditure is to comply with existing regulations of CEA (Technical Standard for construction of Electric Plant & Electric lines) Regulations, 2010 notification issued on 20.8.2010 and CEA (safety requirement of construction, O&M of Electric plants & Electric lines) Regulations, 2011 notification dated 24.11.2011. The petitioner further submitted that this is also recommended by Dy. Commandant of CISF (Ministry of Home Affairs) vide letter dated 15.7.2014.

17. We have examined the submission of the petitioner. It is observed that the petitioner has not established that the augmentation of a firefighting system is due to any change in law. A proper well equipped fire fighting system was the requirement in any thermal power station even prior to the CEA safety standards which came in the year 2010. Therefore CEA Regulations, 2010 cannot be said to be a Change-in-law. Further, the plant was operating with the existing fire fighting system since its COD. In addition, the petitioner has not furnished any supportive document or



notification which suggests that the letter from Deputy Commandant CISF is due to advice or direction from the Appropriate Government/ agency. Hence, the claim under Regulation 14(3)(iii) towards security and safety of plant cannot be entertained under this regulation. Accordingly, expenditure of ₹280.00 lakh in the year 2015-16 for augmentation of a firefighting system is not allowed. However, the petitioner has been allowed compensation allowance for meeting such type of capital expenditure and the same should be met from the said allowance.

18. Based on the above discussions, the projected additional capital expenditure allowed during the period 2014-19 is summarised as under:

(₹ in lakh)						
Package Name	Regulations under which claimed	2014-15	2015-16	2016-17	2017-18	2018-19
Raising Ash dyke	14(3)(iv)	2383.00	2300.00	1406.00	1124.00	2783.00
Permanent Dust suppression system for Lagoons 1 & 2	14(3)(ii)	400.00	536.00	0.00	0.00	0.00
Dry Ash evacuation system	14(3)(ii)	2854.00	504.00	0.00	0.00	0.00
Augmentation of Fire Fighting system	14(3)(ii)& 14(3)(iii)	0.00	0.00	0.00	0.00	0.00
		<b>5637.00</b>	<b>3340.00</b>	<b>1406.00</b>	<b>1124.00</b>	<b>2783.00</b>

19. Accordingly, the capital cost for the period 2014-19 in respect of the generating station is worked out and allowed as under:

(₹ in lakh)					
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	353306.58	358943.58	362283.58	363689.58	364813.58
Projected additional capital expenditure admitted	5637.00	3340.00	1406.00	1124.00	2783.00
<b>Closing capital cost</b>	<b>358943.58</b>	<b>362283.58</b>	<b>363689.58</b>	<b>364813.58</b>	<b>367596.58</b>

## Debt–Equity Ratio

20. Regulation 19 of the 2014 Tariff Regulations provides as under:

- (1) *For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*

*Provided that:*

- (i) *where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
- (ii) *the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*



(iii) any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt-equity ratio.

**Explanation** - The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

- (2) The generating Company or the transmission licensee shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilisation made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.
- (3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.
- (4) In case of generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt:equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt:equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.
- (5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.

21. Accordingly, the gross normative loan and equity amounting to ₹247314.61 lakh and ₹105991.98 lakh, respectively as on 31.3.2014 as considered in order dated 2.11.2015, has been considered as gross normative loan and equity as on 1.4.2014. Hence, the normative debt equity ratio of 70:30 has been considered in the case of additional capital expenditure. This is subject to truing-up in terms of the 2014 Tariff Regulations.

### **Return on Equity**

22. Regulation 24 of the 2014 Tariff Regulations provides as under:

**“24. Return on Equity:** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

Provided that:

i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:



ii). the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:

iii). additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

iv). the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:

v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:

vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.

23. Regulation 25 of the 2014 Tariff Regulations provides as under:

#### **“Tax on Return on Equity**

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non-generation or non-transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”.

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

*Rate of pre-tax return on equity = Base rate / (1-t)*

Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.

24. The petitioner has claimed return on equity considering base rate of 15.5% and effective tax rate of 23.939%. However, the petitioner in its submissions dated 23.9.2015 in Petition No. 290/GT/2014 (Singrauli STPS) has submitted that the effective tax rate of 22.584% based on the actual profit and tax paid for the year 2014-15. During the hearing of NTPC petitions, beneficiaries had raised an issue on the computation of effective tax rate. This issue being not confined to a single petition and being generic in nature as the issue is applicable to all NTPC petitions uniformly need deliberation. On this issue against specific query through ROP, the petitioner vide its affidavit



dated 8.1.2016 in Petition no. 280/GT/2014 (Farakka STPS, Stage-III) has filed Auditor's Certificate regarding deposit of advance tax on generation business for the year 2014-15 as well as Income Tax return for the financial year 2014-15 (Assessment Year 2015-16). We have examined the documents submitted and observed that the regulation prescribe computation of effective tax rate on the basis of tax paid, still we deem it proper to allow grossing up on MAT rate considering the fact that the matter is getting decided in the year 2016-17. Accordingly, the effective tax rate (MAT) of 20.961% has been considered for the year 2014-15 and 21.342% for the year 2015-16 onwards up to the year 2018-19 for the purpose of grossing up of base rate of 15.5%. Accordingly, the rate of Return on Equity works out to 19.610% for the year 2014-15 and 19.705% for the year 2015-16 onwards. This is however, subject to true-up. Accordingly, return on equity has been worked out as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Normative Equity	105991.98	107683.08	108685.08	109106.88	109444.08
Addition due to Additional capital expenditure	1691.10	1002.00	421.80	337.20	834.90
Closing Equity	107683.08	108685.08	109106.88	109444.08	110278.98
Average Equity	106837.53	108184.08	108895.98	109275.48	109861.53
Rate of Return on Equity	15.500%	15.500%	15.500%	15.500%	15.500%
Effective tax rate	20.961%	21.342%	21.342%	21.342%	21.342%
Return on Equity (Pre-tax)	19.610%	19.705%	19.705%	19.705%	19.705%
<b>Return on Equity (Pre-tax) - Annualised</b>	<b>20950.84</b>	<b>21317.67</b>	<b>21457.95</b>	<b>21532.73</b>	<b>21648.21</b>

(₹ in lakh)

### Interest on Loan

25. Regulation 26 of the 2014 Tariff Regulations provides as under:

**“26. Interest on loan capital:** (1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalization of such asset.

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:



*Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:*

*Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*

*(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*

*(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.*

*(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.*

*(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:*

*Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”*

26. Interest on loan has been worked out as under:

- (a) The gross normative loan of ₹247314.61 lakh as on 1.4.2014 has been considered.
- (b) Cumulative repayment of loan of ₹117343.44 lakh as on 31.3.2014 as considered in order dated 2.11.2015 in Petition No.304/GT/2014 has been considered as on 1.4.2014.
- (c) Accordingly, the net normative opening loan as on 1.4.2014 works out to ₹ 129971.17 lakh.
- (d) Addition to normative loan on account of the admitted additional capital expenditure has been considered on year to year basis.
- (e) Depreciation allowed for the period has been considered as repayment of normative loan during the respective year for the period 2009-14.
- (f) In line with the provisions of the regulation, the weighted average rate of interest has been calculated applying the actual loan portfolio existing as on 1.4.2014 along with subsequent additions during the period 2014-19, if any, for the generating station. In case of loans carrying floating rate of interest the rate of interest as provided by the petitioner has been considered for the purpose of tariff. The calculations for weighted average rate of interest on loan have been enclosed as Annexure-I to this order.

27. The necessary calculation for interest on loan is as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Notional Loan	247314.61	251260.51	253598.51	254582.71	255369.51
Cumulative Repayment of Loan up to previous year	117343.44	135261.10	146264.58	157451.12	168744.40
Net Opening Loan	129971.17	115999.41	107333.92	97131.58	86625.11
Addition due to Additional Capitalisation	3945.90	2338.00	984.20	786.80	1948.10





Repayment of Loan during the period	17917.66	11003.48	11186.54	11293.27	11475.15
Net Closing Loan	115999.41	107333.92	97131.58	86625.11	77098.06
Average Loan	122985.29	111666.67	102232.75	91878.35	81861.58
Weighted Average Rate of Interest on Loan	3.1374%	3.1356%	3.1336%	3.1312%	3.1284%
<b>Interest on Loan</b>	<b>3858.50</b>	<b>3501.45</b>	<b>3203.57</b>	<b>2876.94</b>	<b>2561.00</b>

## Depreciation

28. Regulation 27 of the 2014 Tariff Regulations provides as under:

**“27. Depreciation:** (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.

*Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.*

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:

*Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:*

*Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:*

*Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.*

(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in **Appendix-II** to these regulations for the assets of the generating station and transmission system:

*Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.*

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.



(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services.”

29. The cumulative depreciation amounting to ₹160349.22 lakh as on 31.3.2014 as considered in order dated 2.11.2015 has been considered for the purpose of tariff. Further, the value of freehold land included in the average capital cost has been adjusted while calculating depreciable value for the purpose of tariff. Accordingly, the balance depreciable value (before providing depreciation) for the year 2014-15 works out to ₹153255.43 lakh. Since as on 1.4.2014, the used life of the generating station is 11.33 years which is less than 12 years from the effective station COD of 30.11.2002, the depreciation shall be calculated by applying weighted average rate of depreciation for the year 2014-15. Further, since the used life of the generating station as on 1.4.2015 exceed 12 years from the effective station COD, the depreciation for the period 2015-19 shall be calculated using spreading of the remaining depreciable value over the balance useful life for respective years.

30. The petitioner has claimed the depreciation considering the weighted average rate of depreciation of 5.03% for the year 2014-15 after spreading of the remaining depreciable value over the balance useful life for period 2015-19. However, considering the rates of depreciation as specified in Appendix-II to the 2014 Tariff Regulations, the weighted average rate of depreciation for the year 2014-15 works out to 5.0313%, and the same has been considered for calculating depreciation for the year 2014-15. For the year 2015-16 and onwards, depreciation has been calculated by spreading over the remaining depreciable value over the balance useful life of the generating station for respective years.

31. Accordingly, depreciation has been computed as follows:

	(₹ In lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Average Capital Cost	356125.08	360613.58	362986.58	364251.58	366205.08
Freehold land included above	7675.47	7675.47	7675.47	7675.47	7675.47
Depreciable value @ 90%	313604.66	317644.31	319780.01	320918.51	322676.66





Remaining useful life at the beginning of the year	13.67	12.67	11.67	10.67	9.67
Balance depreciable value	153255.43	139377.42	130509.64	120461.60	110926.47
<b>Depreciation (annualized)</b>	<b>17917.66</b>	<b>11003.48</b>	<b>11186.54</b>	<b>11293.27</b>	<b>11475.15</b>
Cumulative depreciation at the end	178266.89	189270.37	200456.91	211750.18	223225.33

### Compensation Allowance

32. The petitioner has claimed compensation allowance (unit-wise) to meet expenses on new assets of capital nature including in the nature of minor assets as under:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
200.00	200.00	200.00	200.00	500.00

33. Regulation 17(1) of the 2014 Tariff Regulations provides as under:

**“17. Compensation Allowance:** (1) In case of coal-based or lignite-fired thermal generating station or a unit thereof, a separate compensation allowance shall be admissible to meet expenses on new assets of capital nature which are not admissible under Regulation 14 of these regulations, and in such an event, revision of the capital cost shall not be allowed on account of compensation allowance but the compensation allowance shall be allowed to be recovered separately.

(2) The Compensation Allowance shall be allowed in the following manner from the year following the year of completion of 10, 15, or 20 years of useful life:”

Years of operation	Compensation Allowance (₹ lakh/MW/year)
0-10	Nil
11-15	0.20
16-20	0.50
21-25	1.00

34. In terms of above regulation, both the units of the generating station are in commercial operation for more than 10 years from their respective date of CODs and accordingly, the compensation allowance worked out is as under:

(₹ in lakh)		
Description	Unit-I	Unit -II
Capacity in MW	500	500
COD	1.9.2002	1.3.2003
Useful life as on 1.4.2014	11.58	11.085
Actual useful life		
a) 10 years	1.9.2012	1.3.2013
b) 15 years	1.9.2017	1.3.2018
c) 20 years	1.9.2022	1.3.2023
d) 25 years	1.9.2027	1.3.2028
2014-15	100.00	100.00
2015-16	100.00	100.00
2016-17	100.00	100.00
2017-18	100.00	100.00



2018-19	250.00	250.00
<b>Total</b>	<b>650.00</b>	<b>650.00</b>

35. Therefore, the compensation allowance of ₹650.00 lakh each for Unit-I and Unit-II during the period 2014-19 is allowed.

### O&M Expenses

36. Regulation 29 (1) (c) of the 2014 Tariff Regulations provides the year-wise O&M expense norms claimed for the generating station of the petitioner as under:

<i>(₹ in lakh/MW)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
16.00	17.01	18.08	19.22	20.43

37. Accordingly, the year-wise O&M expenses claimed by the petitioner in terms of the above said norms are allowed as under:

<i>(₹ in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
16000.00	17010.00	18080.00	19220.00	20430.00

### Water Charges

38. Regulation 29(2) of the 2014 Tariff Regulations provide as under:

*“29.(2) The Water Charges and capital spares for thermal generating stations shall be allowed separately:*

*Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details regarding the same shall be furnished along with the petition:*

*Provided that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization*

39. In terms of the above regulation, water charges are to be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check of the details furnished by the petitioner.

40. The petitioner has claimed water charges based on the expected water consumption of the generating station and the type of cooling water system has also been furnished. The water charges claimed by the petitioner are as follows:



(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
526.32	559.74	595.28	633.09	673.29

41. In order to examine the trend of the actual water consumption and rate of water charges, the petitioner was directed vide ROP of the hearing dated 27.2.2015 to furnish the details of the actual water consumption along with the rate of water charges for the last five years (i.e 2009-10 to 2013-14) along with relevant notification in support of the same. The details in respect of water charges such as type of cooling water system, water consumption, rate of water charges as applicable for 2013-14 have been furnished by the petitioner as under:

Description	Remarks
Type of Plant	Coal
Type of cooling water system	Closed circuit cooling
Consumption of water	4247969 kl/Annum
Rate of water charges	₹12.39/kl
<b>Total water charges in 2013-14</b>	<b>₹526.32 lakh</b>

42. In compliance with the above, the petitioner vide affidavit dated 4.6.2015 has furnished the details of the year-wise actual water consumption and water charges for last 5 years as detailed below:

Year	Quantity of sweet water (KL)	Rate (₹/KL)	Total Water Charges (₹ in lakh)
2009-10	8619520	8.26	712
2010-11	5882776	8.54	495*
2011-12	6325694	8.82	558
2012-13	5351397	11.8	631
2013-14	4247969	12.39	526

\* ₹ 7.00 lakh in 2010-11 were on account of construction activities and hence not included in revenue expenditure

43. The petitioner vide ROP of the hearing dated 10.9.2015 was further directed to submit the reason for variation in quantity of water consumed from 2009-10 to 2013-14. In response, the petitioner vide affidavit dated 22.9.2015 has submitted that the reason for variation is due to rainwater received in the reservoir during the year, raising of reservoir bund height from 3.00 meter to 3.10 meter, need of building up reservoir level due to frequent canal closure and lower generation in 2013-14 as compared to 2009-10. It has further submitted that the permissible quantity of water to be consumed on yearly basis shall be governed by the Bulk Water Supply Agreement between GoAP, VIWSCO and NTPC. It has also stated that the user shall pay to the operator the special charges of ₹7 per KL till 31.3.2005 and it shall be escalated @ 2% for the



financial year 2005-06 and thereafter @ 4% annually to a maximum of ₹8.93 per KL. The petitioner has added that the charges of ₹8.93 per KL or charge fixed by Charges Review Committee whichever is lower, shall be applicable to contract volume or up to 32 MLD whichever is lower and beyond 32 MLD or beyond the contract volume whichever is lower at that point, the charges shall be as fixed by Charges Review Committee. The notification of the Govt. of Andhra Pradesh, Irrigation and CAD, Department, dated 25.2.2015, fixing the revised rate of ₹11.80 per KL for 2012-13 w.e.f. 1.4.2012, with annual escalation of 5% has been enclosed by the petitioner.

44. The petitioner has claimed the water charges during 2014-19 as under:

<i>(₹ in lakh)</i>	
<b>Year</b>	<b>Projected Water charges</b>
2014-15	526.32
2015-16	559.74
2016-17	595.28
2017-18	633.09
2018-19	673.29

45. From table above, it is noted that the petitioner has claimed the same water charges during 2014-15 as in the year 2013-14. It is observed that the water consumption was minimum during the period 2009-14. The petitioner has claimed the water charges during 2014-15 based on the water consumption and water charges paid during the year 2013-14 and have escalated the same @ 6.35% as per the escalation rate in O&M norms specified by the Commission for the period 2014-19. This escalation rate of 6.35% considered by the petitioner is not in line with the escalation rate of 5% specified in the Notification dated 25.2.2015 of the GoAP. Hence, the yearly escalation of water charges rate as per notification dated 25.2.2015 has been considered. Accordingly, water charges have been allowed with the annual escalation of 5% to the water charges claimed during 2014-15. Based on this, water charges for the period 2014-19 are allowed as under:

<i>(₹ in lakh)</i>	
<b>Year</b>	<b>Water charges allowed</b>
2014-15	526.32
2015-16	552.64
2016-17	580.27
2017-18	609.28
2018-19	639.75



46. The water charges allowed as above is subject to truing -up at the end of the tariff period for which the petitioner is directed to place on record all relevant information.

47. Accordingly, the total O&M expenses including water charges as claimed by the petitioner and allowed for the purpose of tariff is as under:

	(₹ in lakh)					
	2014-15	2015-16	2016-17	2017-18	2018-19	Total
O&M Expenses as claimed	16000.0	17010.0	18080.0	19220.0	20430.0	90740.0
O&M Expenses as allowed	16000.0	17010.0	18080.0	19220.0	20430.0	90740.0
Water Charges as claimed	526.32	559.74	595.28	633.09	673.29	2987.71
Water Charges as allowed	526.32	552.64	580.27	609.28	639.75	2908.25
Total O&M Expenses as claimed (including Water charges)	16526.32	17569.74	18675.28	19853.28	21103.29	93727.72
<b>O&amp;M Expenses allowed (including water charges)</b>	<b>16526.32</b>	<b>17562.64</b>	<b>18660.27</b>	<b>19829.28</b>	<b>21069.74</b>	<b>23648.25</b>

### Capital spares

48. The petitioner has not claimed capital spares on projection basis during the period 2014-19. Accordingly, the same has not been considered in this order. The claim of the petitioner, if any, at the time of truing-up, shall be considered on merits, after prudence check.

### Operational Norms

49. The operational norms in respect of the generating station claimed by the petitioner are as under:

Target Availability (%)	83.00
Heat Rate (kcal/kwh)	2375.00
Auxiliary Energy Consumption (%)	5.25
Specific Oil Consumption (ml/ kwh)	0.50

50. The operational norms claimed by the petitioner are in accordance with Regulation 36 of the 2014 Tariff Regulations and discussed as under:

### Normative Annual Plant Availability Factor (NAPAF)

51. Regulation 36 (A) (a) of the 2014 Tariff Regulations provides as under:

*(a) All Thermal generating stations, except those covered under clauses (b) (c) (d) &(e)- 85%.*

*Provided that in view of the shortage of coal and uncertainty of assured coal supply on sustained basis experienced by the generating stations, the NAPAF for recovery of fixed charges shall be 83% till the same is reviewed.*

*The above provision shall be reviewed based on actual feedback after 3 years from 01.04.2014.*



52. The petitioner has considered the target availability norm of 83% during 2014-19. The Commission due to shortage of domestic coal supply has relaxed target availability norm to 83% for first 3 years from 1.4.2014 and the same shall be reviewed after 3 years. Hence, in view of the above provision the target availability of 83% is allowed for the period 2014-15 to 2016-17 and 85% for the period 2017-18 & 2018-19 in terms of the Regulation 36(A) (a) of the 2014 Tariff Regulations.

#### **Heat Rate (kcal/kwh)**

53. Regulation 36(C)(a) of the 2014 Tariff Regulations, provides Gross Station Heat Rate of 2375 kCal/kWh for existing coal based thermal generating stations of 500 MW sets whose COD's were before 1.4.2009. The COD of the generating station was 1.3.2003. Hence, the heat rate considered by the petitioner is as per norms and is allowed.

#### **Auxiliary Power Consumption**

54. Regulation 36(E)(a) of Tariff Regulations, 2014 provides Auxiliary Energy Consumption of 5.25% for coal based generating stations of 500 MW sets with Natural Draft cooling tower or without cooling tower with steam driven BFP. Hence, the Auxiliary Energy Consumption considered by the petitioner is as per norms and is allowed.

#### **Specific Oil Consumption**

55. Regulation 36(D)(a) of the 2014 Tariff Regulations, provides secondary fuel oil consumption of 0.50 ml/kWh for coal-based generating station. Hence, the secondary fuel oil consumption considered by the petitioner is as per norms and is allowed.

#### **Interest on Working Capital**

56. Sub-section (c) of clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

*"28. Interest on Working Capital:*

*(1) The working capital shall cover*

*(b) Open-cycle Gas Turbine/Combined Cycle thermal generating stations*

*(i) Fuel cost for 30 days corresponding to the normative annual plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;*



(ii) Maintenance spares @ 30% of operation and maintenance expense specified in regulation 29; and

(iii) Liquid fuel stock for 15 days corresponding to the normative annual plant availability factor and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel’;

(iv)Receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;

(v) Operation and maintenance expenses for one month.”

### **Fuel Components and Energy Charges in working capital**

57. The petitioner has claimed cost for fuel components in working capital based on ‘as fired’ GCV of coal procured and burnt for the preceding three months of January, 2014, February, 2014 and March, 2014 and secondary fuel oil for the preceding three months of January, 2014, February, 2014 and March, 2014, as under:

	<i>(₹ in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Cost of Coal for 2 months	30954	31038	30954	30954	30954
Cost of Secondary fuel oil 2 months	328.75	329.65	328.75	328.75	328.75

58. The Commission vide ROP of the hearing dated 27.2.2015 directed the petitioner to submit the GCV of coal on ‘as received’ basis. In response, the petitioner vide affidavit dated 4.6.2015 has submitted that they did not have suitable infrastructure for measurement of representative GCV on ‘as received’ basis.

59. The issue of ‘as received’ GCV for computation of energy charges was challenged by NTPC and other generating companies through writ petition in the Hon’ble High Court of Delhi. The writ petition was heard on 7.9.2015 and Hon’ble High Court of Delhi had directed that the Commission shall decide the place from where the sample of coal should be taken for measurement of GCV of coal on as received basis within 1 month on the request of petitioners.

60. As per the directions of the Hon’ble High Court, the Commission vide order dated 25.1.2016 in Petition No. 283/GT/2014 has decided as under:

*“58. In view of the above discussion, the issues referred by the Hon’ble High Court of Delhi are decided as under:*



(a) *There is no basis in the Indian Standards and other documents relied upon by NTPC etc. to support their claim that GCV of coal on as received basis should be measured by taking samples after the crusher set up inside the generating station, in terms of Regulation 30(6) of the 2014 Tariff regulations.*

(b) *The samples for the purpose of measurement of coal on as received basis should be collected from the loaded wagons at the generating stations either manually or through the Hydraulic Auger in accordance with provisions of IS 436(Part1/Section1)-1964 before the coal is unloaded. While collecting the samples, the safety of personnel and equipment as discussed in this order should be ensured. After collection of samples, the sample preparation and testing shall be carried out in the laboratory in accordance with the procedure prescribed in IS 436(Part1/Section1)-1964 which has been elaborated in the CPRI Report to PSERC.”*

61. Further, the petitioner has claimed energy charge rate (ECR) of 272.452 Paise/kWh based on the weighted average price, GCV of coal (as fired basis) & oil procured and burnt for the preceding three months. It is observed that the petitioner has not placed on record the GCV of coal on ‘as received’ basis though the petitioner was statutorily required to furnish such information with effect from 1.4.2014. In compliance with the direction of the Hon’ble High Court of Delhi, the Commission in its order dated 25.1.2016 in Petition No. 283/GT/2014 has clarified that the measurement of GCV of coal on as received basis shall be taken from the loaded wagons at the unloading point either manually or through the Hydrolic Augur. The petitioner has not submitted the required data regarding measurement of GCV of coal in compliance with the directions contained in the said order dated 25.1.2016. The present petition cannot be kept pending till the petitioner submits the required information. Hence, the Commission has decided to compute fuel components and the energy charges in the working capital by provisionally taking the GCV of coal on as ‘billed basis’ and allowing an adjustment for total moisture as per the formula given as under:

$$\frac{\text{GCV} \times (1 - \text{TM})}{(1 - \text{IM})}$$

Where: GCV=Gross Calorific value of coal  
TM=Total moisture  
IM= Inherent moisture

62. In view of the above, the cost for fuel components in working capital have been computed at 83% NAPAF for the years 2014-15, 2015-16 and 2016-17 and at 85% NAPAF for the year 2017-18 & 2018-19 and based on ‘as billed’ GCV of coal and price of coal procured and secondary fuel oil for the preceding three months from January 2014 to March 2014 and allowed as under:





(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal for stock-30 days	11799.15	11799.15	11799.15	12083.47	12083.47
Cost of Coal for Generation-30 days	11799.15	11799.15	11799.15	12083.47	12083.47
Cost of Secondary fuel oil 2 months	328.75	329.65	328.75	336.67	336.67

63. Similarly, the energy charge rate (ECR) based on operational norms specified in 2014 Regulations and on 'as billed' GCV of coal for preceding 3 months i.e. March to January 2014 is worked out as under:

Sr. No.		Unit	2014-19
1	Capacity	MW	2x500
2	Gross Station Heat Rate	Kcal/kWh	2375
3	Aux. Energy Consumption	%	5.25
4	Weighted average GCV of oil (As fired)	Kcal/lit	9793
5	Weighted average GCV of Coal (As Billed)	Kcal/kg	4809.20
6	Adjustment on account of coal received at the generating station for equilibrated basis (Air dried) in the billed GCV Of Coal India		*
7	Weighted average price of oil	Rs/KL	54258.31
8	Weighted average price of Coal	Rs/MT	4006.32
9	<b>Rate of energy charge ex-bus</b>	<b>Paise/kWh</b>	<b>211.246**</b>

\* To be calculated by the petitioner based on the adjustment formula

\*\* To be revised as per the figures at Sr. No. 6

64. The GCV of coal as computed above shall be adjusted in the light of the GCV of coal on 'as received basis' computed by the petitioner as per our directions in order dated 25.1.2016 in Petition No. 283/GT/2014.

65. Energy charges for 2 months on the basis of 'as billed' GCV for the purpose of interest on working capital has been worked out as under:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
24254.80	24321.26	24254.80	24839.26	24839.26

### Maintenance Spares

66. The petitioner has claimed maintenance spares in the working capital as under:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
3305.26	3513.95	3735.06	3970.62	4220.66

67. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provide for maintenance spares @ 20% of the operation & maintenance expenses as specified in Regulation 29. As specified in



Regulation 29 (2) of the 2014 Tariff Regulations and as allowed by the Commission in order dated 6.10.2015 in Petition No. 186/GT/2014 (Sugen Power Plant), the maintenance spares @ 20 % of the operation & maintenance expenses including water charges, allowed are as under:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
3305.26	3512.53	3732.05	3965.86	4213.25

### Receivables

68. Receivables equivalent to two months of capacity charge and energy charges (based on primary fuel only) has been worked out and allowed as under:

(₹ in lakh)					
	2014-15	2015-16	2016-17	2017-18	2018-19
Variable Charges - 2 months	24249.57	24316.01	24249.57	24833.90	24833.90
Fixed Charges - 2 months	11319.57	10327.35	10524.45	10733.37	10949.80
	<b>35569.14</b>	<b>34643.36</b>	<b>34774.02</b>	<b>35567.27</b>	<b>35783.70</b>

### O & M Expenses (1 month)

69. O&M expenses for 1 month claimed by the petitioner for the purpose of working capital are as under:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
1377.19	1464.15	1556.27	1654.42	1758.61

70. Based on the O&M expense norms specified by the Commission and in terms of the Commission's order dated 6.10.2015 in Petition No. 186/GT/2014, the O&M expenses for 1 month is allowed as under:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
1377.19	1463.55	1555.02	1652.44	1755.81

### Rate of interest on working capital

71. Clause (3) of Regulation 28 of the 2014 Tariff Regulations provides as under:

*“Interest on working Capital: (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later.”*



72. In terms of the above regulations, SBI PLR of 13.50% (Bank rate 10.00 + 350bps) has been considered for the purpose of calculating interest on working capital. Interest on working capital has been computed as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of coal toward stock – 30 days	11799.15	11799.15	11799.15	12083.47	12083.47
Cost of coal towards generation - 30 days	11799.15	11799.15	11799.15	12083.47	12083.47
Cost of secondary fuel oil - 2 months	328.75	329.65	328.75	336.67	336.67
Maintenance Spares - 20% of O&M	3305.26	3512.52	3732.05	3965.85	4213.94
Receivables	35569.14	34643.36	34774.02	35567.27	35783.70
O&M expenses - 1 month	1377.19	1463.55	1555.02	1652.44	1755.81
<b>Total Working Capital</b>	<b>64178.65</b>	<b>63547.39</b>	<b>63988.15</b>	<b>65689.16</b>	<b>66257.06</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Interest on Working Capital</b>	<b>8664.12</b>	<b>8578.90</b>	<b>8638.40</b>	<b>8868.04</b>	<b>8944.70</b>

73. Accordingly, annual fixed charges approved for the generating station for the period from 1.4.2014 to 31.3.2019 is summarized as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	17917.66	11003.48	11186.54	11293.27	11475.15
Interest on Loan	3858.50	3501.45	3203.57	2876.94	2561.00
Return on Equity	20950.84	21317.67	21457.95	21532.73	21648.21
Interest on Working Capital	8664.12	8578.90	8638.40	8868.04	8944.70
O&M Expenses	16526.32	17562.64	18660.27	19829.28	21069.74
Compensation Allowance	200.00	200.00	200.00	200.00	500.00
<b>Total</b>	<b>68117.43</b>	<b>62164.12</b>	<b>63346.72</b>	<b>64600.23</b>	<b>66198.78</b>

### Month to Month Energy Charges

74. Clause 6 sub-clause (a) of Regulation 30 of the 2014 Tariff Regulations provides for computation and payment of Capacity Charge and Energy Charge for thermal generating stations:

*“6. Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal place in accordance with the following formula:*

*(a) For coal based and lignite fired stations*

$$ECR = \{(GHR - SFC \times CVSF) \times LPPF / CVPF + SFC \times LPSFi + LC \times LPL\} \times 100 / (100 - AUX)$$

Where,

*AUX = Normative auxiliary energy consumption in percentage.*

*CVPF = Gross calorific value of primary fuel as fired, in kCal per kg, per litre or per standard cubic metre, as applicable.*

*CVSF = Calorific value of secondary fuel, in kCal per ml.*

*ECR = Energy charge rate, in Rupees per kWh sent out.*

*GHR = Gross station heat rate, in kCal per kWh.*

*LC = Normative limestone consumption in kg per kWh.*

*LPL = Weighted average landed price of limestone in Rupees per kg.*

*LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per*



75. The petitioner shall compute and claim the Energy Charges on month to month basis from the beneficiaries based on the formulae given under Regulation 30(6)(a) of the 2014 Tariff Regulations, 2014 read with Commission's order dated 25.1.2016 in Petition No. 283/GT/2014.

76. The petitioner has been directed by the Commission in its order dated 19.2.2016 in Petition No. 33/MP/2014, to introduce helpdesk to attend to the queries of the beneficiaries with regard to the Energy Charges. Accordingly, contentious issues if any, which arise regarding the Energy Charges, should be sorted out with the beneficiaries at the Senior Management level.

#### **Application Fee and Publication Expenses**

77. The petitioner has sought the reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the period 2014-19. The petitioner has deposited the filing fees of ₹4400000/- for the period 2014-15 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations and in line with the decision in Commission's order dated 5.1.2016 in Petition No. 232/GT/2014, we direct that the petitioner shall be entitled to recover *pro rata*, the filing fees and the expenses incurred on publication of notices for the period 2014-15 directly from the respondents on submission of documentary proof. The filing fees for the remaining years of the tariff period 2015-19 shall be recovered *pro rata* after deposit of the same and production of documentary proof.

78. The annual fixed charges approved for the period 2014-19 as above are subject to truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

79. Petition No. 270/GT/2014 is disposed of in terms of the above.

**-Sd/-**  
**(Dr. M.K.Iyer)**  
**Member**

**-Sd/-**  
**(A. S. Bakshi)**  
**Member**

**-Sd/-**  
**(A. K. Singhal)**  
**Member**

**-Sd/-**  
**(Gireesh B. Pradhan)**  
**Chairperson**



**Annexure-I****Calculation Of Weighted Average Rate Of Interest On Loan**

(₹ in lakh)

Sl. no.	Name of loan	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	JBIC I	Net opening loan	52060.64	48055.97	44051.30	40046.63	36041.96
		Add: Addition during the period	0.00	0.00	0.00	0.00	0.00
		Less: Repayment during the period	4004.67	4004.67	4004.67	4004.67	4004.67
		Net Closing Loan	48055.97	44051.30	40046.63	36041.96	32037.29
		Average Loan	50058.31	46053.64	42048.97	38044.30	34039.63
		Rate of Interest	3.5000%	3.5000%	3.5000%	3.5000%	3.5000%
		Interest	1752.04	1611.88	1471.71	1331.55	1191.39
2	JBIC II	Net opening loan	42847.48	40327.04	37806.60	35286.16	32765.72
		Add: Addition during the period	0.00	0.00	0.00	0.00	0.00
		Less: Repayment during the period	2520.44	2520.44	2520.44	2520.44	2520.44
		Net Closing Loan	40327.04	37806.60	35286.16	32765.72	30245.28
		Average Loan	41587.26	39066.82	36546.38	34025.94	31505.50
		Rate of Interest	3.0000%	3.0000%	3.0000%	3.0000%	3.0000%
		Interest	1247.62	1172.00	1096.39	1020.78	945.17
3	JBIC III	Net opening loan	90282.55	84639.89	78997.23	73354.57	67711.91
		Add: Addition during the period	0.00	0.00	0.00	0.00	0.00
		Less: Repayment during the period	5642.66	5642.66	5642.66	5642.66	5642.66
		Net Closing Loan	84639.89	78997.23	73354.57	67711.91	62069.25
		Average Loan	87461.22	81818.56	76175.90	70533.24	64890.58
		Rate of Interest	3.0000%	3.0000%	3.0000%	3.0000%	3.0000%
		Interest	2623.84	2454.56	2285.28	2116.00	1946.72
4	JBIC IV	Net opening loan	3233.81	2975.11	2716.41	2457.71	2199.01
		Add: Addition during the period	0.00	0.00	0.00	0.00	0.00
		Less: Repayment during the period	258.70	258.70	258.70	258.70	258.70
		Net Closing Loan	2975.11	2716.41	2457.71	2199.01	1940.31
		Average Loan	3104.46	2845.76	2587.06	2328.36	2069.66
		Rate of Interest	3.0000%	3.0000%	3.0000%	3.0000%	3.0000%
		Interest	93.13	85.37	77.61	69.85	62.09
5	<b>Gross Total</b>	Net opening loan	188424.48	175998.01	163571.54	151145.07	138718.60
		Add: Addition during the period	0.00	0.00	0.00	0.00	0.00
		Less: Repayment during the period	12426.47	12426.47	12426.47	12426.47	12426.47
		Net Closing Loan	175998.01	163571.54	151145.07	138718.60	126292.13
		Average Loan	182211.25	169784.78	157358.31	144931.84	132505.37
		Rate of Interest	3.1374%	3.1356%	3.1336%	3.1312%	3.1284%
		<b>Interest</b>	<b>5716.63</b>	<b>5323.81</b>	<b>4930.99</b>	<b>4538.18</b>	<b>4145.36</b>



**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 418/GT/2020**

**Coram:**

**Shri P. K. Pujari, Chairperson**

**Shri I. S. Jha, Member**

**Shri Pravas Kumar Singh, Member**

**Date of Order: 8<sup>th</sup> February, 2022**

**In the matter of:**

**Corrigendum to the order dated 24.1.2022 in Petition No. 418/GT/2020.**

**In the matter of**

Petition for approval of tariff of Simhadri Super Thermal Power Station Stage-II (1000 MW) for the period from 1.4.2019 to 31.3.2024

**And**

**In the matter of:**

NTPC Limited,  
NTPC Bhawan, Core-7, Scope Complex,  
7, Institutional Area, Lodhi Road  
New Delhi-110003

**.....Petitioner**

**Vs**

1. AP Eastern Power Distribution Company Limited,  
Corporate Office, P&T Colony, Seethammadhara,  
Visakhapatnam – 530 013 (AP)
2. AP Southern Power Distribution Company Limited,  
Corporate Office, Back side, Srinivasa Kalyana Mandapam,  
Tiruchhanur Road, Kesavayana Gunta,  
Tirupathi – 517 503 (AP)
3. Telangana State Northern Power Distribution Company Limited,  
H.No. 2-5-31/2, Vidyut Bhavan, Nakkalagutta, Hanamkonda,  
Warangal – 506 001 (AP)
4. Telangana State Southern Power Distribution Company Limited,  
Mint Compound, Corporate Office,  
Hyderabad – 500 063 (AP)
5. Tamil Nadu Generation & Distribution Corporation Limited,  
144, Anna Salai, Chennai – 600 002



6. Bangalore Electricity Supply Company Limited,  
Krishna Rajendra Circle,  
Bangalore - 560 009
7. Mangalore Electricity Supply Company Limited,  
MESCOM Bhavan, Corporate Office,  
Bejai, Kavoor cross road,  
Mangaluru-575004, Karnataka
8. Chamundeshwari Electricity Supply Corporation Limited,  
Corporate Office, No. 29, Vijayanagar, 2<sup>nd</sup> stage, Hinkal,  
Mysore – 570 017
9. Gulbarga Electricity Supply Company Limited,  
Main road,  
Gulbarga – 585 102, Karnataka
10. Hubli Electricity Supply Company Limited,  
Corporate office, P.B.Road, Navanagar  
Hubli – 580 025
11. Kerala State Electricity Board Limited,  
Vaidyuthi Bhavanam, Pattom,  
Thiruvananthapuram – 695 004
12. Electricity department,  
Government of Puducherry,  
137, NSC Bose Salai  
Puducherry- 605001

.....Respondents

### **CORRIGENDUM ORDER**

The Commission by its order dated 24.1.2022 in Petition No. 418/GT/2020 had determined the tariff of Simhadri Super Thermal Power Station Stage-II (1000 MW) for the 2019-24 tariff period as under:

	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	27708.29	27747.18	27768.11	27768.11	27768.11
Interest on Loan	15005.32	12732.21	10449.37	8302.47	6108.40
Return on Equity	30753.55	30793.55	30816.77	30816.85	30816.96
Interest on Working Capital	5667.92	5300.73	4953.51	4967.05	4977.70
O&M Expenses	24596.68	25489.88	26418.24	27382.01	28371.48
<b>Total annual fixed charges</b>	<b>103731.76</b>	<b>102063.55</b>	<b>100406.00</b>	<b>99236.49</b>	<b>98042.65</b>



2. It is observed that certain inadvertent clerical/ arithmetical errors have crept in the tables under paragraph 50 and paragraph 83 of the order dated 24.1.2022, pertaining to water charges and working capital for Receivables (fixed charges and energy charge for 45 days), respectively, while determining the tariff of the generating station.

3. Therefore, in terms of the Regulation 111 read with Regulation 103A of the CERC (Conduct of Business) Regulations 1999, the inadvertent clerical/ arithmetical errors in the tables under paragraph 50 and paragraph 83 of the order dated 24.1.2022 are being corrected.

4. Accordingly, the following changes are being made to the order dated 24.1.2022 in Petition No. 418/GT/2020:

**(a) In the table under paragraph 50 (Page 34):**

(i) In Column 1, Rows 2 and 4, the word 'Sea Water' is corrected and to be read as 'Sweet Water'.

(ii) In Column 1, Rows 5 and 7, the word 'Sweet Water' is corrected and to be read as 'Sea Water'.

**(b) In the table under paragraph 83 pertaining to Working capital for Receivables, the figures are rectified as under:**

	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Fixed charge for 45 days	13116.00	12920.91	12693.74	12549.56	12369.33
Energy charge for 45 days	24321.19	24254.74	24254.74	24254.74	24321.19
	<b>37437.19</b>	<b>37175.65</b>	<b>36948.48</b>	<b>36804.30</b>	<b>36690.53</b>

**Rate of Interest on Working Capital**

5. Consequent upon the above mentioned rectification, the table under paragraph 86 of the order dated 24.1.2022 pertaining to the Rate of Interest on working capital is modified as under:





(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Working capital for cost of Coal/Lignite for stock (A)	10723.19	10723.19	10723.19	10723.19	10723.19
Working capital for cost of Coal/Lignite for generation (B)	16084.79	16084.79	16084.79	16084.79	16084.79
Working capital for cost of oil for 2 months (C)	262.50	261.79	261.79	261.79	262.50
Working capital for fuel cost (D)	0.00	0.00	0.00	0.00	0.00
Working capital for liquid fuel Stock (E)	0.00	0.00	0.00	0.00	0.00
Working capital for O & M expenses - 1 month (F)	2049.72	2124.16	2201.52	2281.83	2364.29
Working capital for Maintenance spares - 20% of O&M (G)	4919.34	5097.98	5283.65	5476.40	5674.30
Working capital for Receivables – 45 days (H)	37437.19	37175.65	36948.48	36804.30	36690.53
<b>Total Working Capital (I) = (A+B+C+D+E+F+G+H)</b>	<b>71476.74</b>	<b>71467.55</b>	<b>71503.42</b>	<b>71632.30</b>	<b>71799.60</b>
Rate of Interest (J)	12.05%	11.25%	10.50%	10.50%	10.50%
<b>Total Interest on Working capital (K) = (I)*(J)</b>	<b>8612.95</b>	<b>8040.10</b>	<b>7507.86</b>	<b>7521.39</b>	<b>7538.96</b>

### Annual Fixed Charges

6. In view of the above, the annual fixed charges determined by order dated 24.1.2022 in Petition No.418/GT/2020 for the 2019-24 tariff period in paragraph 87 stands modified as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	27708.29	27747.18	27768.11	27768.11	27768.11
Interest on Loan	15005.32	12732.21	10449.37	8302.47	6108.40
Return on Equity	30753.55	30793.55	30816.77	30816.85	30816.96
Interest on Working Capital	8612.95	8040.10	7507.86	7521.39	7538.96
O&M Expenses	24596.68	25489.88	26418.24	27382.01	28371.48
<b>Total annual fixed charges</b>	<b>106676.79</b>	<b>104802.92</b>	<b>102960.34</b>	<b>101790.84</b>	<b>100603.91</b>

7. Except for the above, all other terms contained in order dated 24.1.2022 in Petition No.418/GT/2020 shall remain unchanged.

**Sd/-**  
**(Pravas Kumar Singh)**  
**Member**

**Sd/-**  
**(I.S.Jha)**  
**Member**

**Sd/-**  
**(P.K. Pujari)**  
**Chairperson**



revision was carried out at SRLDC (Block 40 to 82), corresponding revision has not been taken into account by ERPC. ERLDC has not issued any revision for these blocks. It has been stated that energy account of ERPC needs to be corrected.

#### 50.4 TCC deliberations

- Regarding KSEBL issue (MTOA transaction in August 2016), SRLDC had informed that the matter has been taken up with ERLDC.
- KPTCL had informed that they had requested for 11 SEMs urgently from PGCIL. SR-II, PGCIL informed that they had purchased spares SEMs for their use but 11 nos would be provided to KPTCL.
- TCC had noted the above issues and suggested concerned entities to take necessary steps to close the issues.

50.5 SRPC noted the above.

### **51 ISSUES IN BILLING OF GENERATING STATIONS OWNED BY NTPC (TARIFF PERIOD 2014-19)**

51.1 KSEBL vide letter dated 31.01.2017 & 17.02.2017 (refer **Annexure -XVIII & XLVII**) had stated that NTPC have adjusted the total moisture content of coal resulting in increase of working capital and hence increase in AFC. Once the adjustment has been made by CERC and working capital for the entire tariff period is fixed, further adjustment in working capital cannot be allowed. NTPC cannot make further adjustments and claim different amount from the beneficiaries. It is stated that claim of NTPC is not in line with the Regulations and Orders of CERC.

#### 51.2 TCC deliberations

- KSEBL had stated that there was discrepancy in AFC computation as there was duplication of the moisture content adjustment in the Tariff Orders.
- NTPC had stated that adjustment of GCV for moisture content and billing is as per CERC Order and CERC Regulations. It was mentioned in the Order of Tariff that '*6. Adjustment on account of coal received at the generating station for equilibrated basis (Air dried) in the billed GCV Of Coal India*' is '*To be calculated by the petitioner based on the adjustment formula*' and '*Rate of energy charge ex-bus*' is '*to be revised as per the figures at Sr. No. 6*'.
- TCC had observed that NTPC computation appeared to be in line with CERC Order/Regulations.

51.3 SRPC noted the above.

### **52 TPCIL REQUEST TO EXEMPT DEVIATION CHARGES**

52.1 TPCIL vide letter dated 07.01.2016 had requested for to consider the event of 30.12.2015 as "force majeure" during CTU system outage (ISTS) and revise the deviation account for the week 28.12.15 to 03.01.16.

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 293/GT/2014**

**Coram:**

**Shri Gireesh B. Pradhan, Chairperson**

**Shri A.K. Singhal, Member**

**Shri A.S. Bakshi, Member**

**Dr. M.K. Iyer, Member**

**Date of Order: 16<sup>th</sup> February, 2017**

**In the matter of**

Approval of tariff of Talcher Super Thermal Power Station, Stage-II (2000 MW) for the period from 1.4.2014 to 31.3.2019

**And**

**In the matter of**

NTPC Ltd  
NTPC Bhawan,  
Core-7, SCOPE Complex,  
7, Institutional Area, Lodhi Road,  
New Delhi-110003

**.....Petitioner**

**Vs**

1. AP Eastern Power Distribution Company Ltd.  
Corporate office, P& T Colony, Seethammadhara  
Visakhapatnam-530013
2. AP Southern Power Distribution Company Ltd.  
Back side Srinivasa Kalyana Mandapam,  
Tiruchhanur Road, Kesavayana Gunta,  
Tirupathi- 517503
3. Telangana State Northern Power Distribution Company Ltd  
H.No.2-5-31/2, Vidyut Bhavan,  
Nakkalagutta, Hanamkonda  
Warangal- 506001
4. Telanagana State Southern Power Distribution Company Ltd  
Mint Compound, Corporate office,  
Hyderabad (AP)- 500063
5. Tamil Nadu Generation & Distribution Corporation Ltd.  
144, Anna Salai,  
Chennai- 600002



6. Bangalore Electricity Supply Company Ltd.  
Krishna Rajendra Circle,  
Bangalore- 560009
7. Mangalore Electricity Supply Company Ltd.  
Paradigm plaza, A.B.Shetty Circle  
Mangalore- 575001
8. Chamundeshwari Electricity SupplyCorp. Ltd.  
927, L.J.Avenue, New Kantharajours Road  
Saraswathipuram,  
Mysore- 570009
9. Gulbarga electricity Supply Company Ltd.  
Main road Gulbarga- 585102, Karnataka
10. Hubli Electricity Supply Company Ltd.,  
Corporate office, P.B.Road,  
Navanagar, Hubli- 580025
11. Kerala state Electricity Board  
Vaidyuthi Bhavanam, Pattom,  
Thiruvananthapuram- 695004
12. Electricity Department,  
Government of Puducherry  
137, NSC Bose Salai,  
Puducherry- 605001
13. Grid Corporation of Orissa Limited  
Vidyut Bhavan,  
Janpath, Bhubaneswar- 751022

....Respondents

**Parties present:**

Shri Ajay Dua, NTPC  
Shri Bhupinder Kumar, NTPC  
Shri Rajeev Choudhary, NTPC  
Shri B.S.Rajput, NTPC  
Shri Rohit Chhabra, NTPC  
Shri Sameer Aggarwal, NTPC  
Shri Nishant Gupta, NTPC  
Shri T. Vinod Kumar, NTPC  
Shri R.B.Sharma, Advocate, GRIDCO  
Shri S.Vallinayagam, Advocate, TANGEDCO  
Shri Jaya Prakash, TANGEDCO

**ORDER**

This petition has been filed by the petitioner, NTPC for approval of tariff of Talcher Thermal Power Station (2000 MW), Stage- II (hereinafter referred to as “the generating station) for the period from 1.4.2014 to 31.3.2019 in accordance with the



provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”).

2. The generating station with a capacity of 2000 MW comprises of 4 units of 500 MW each. The dates of commercial operation (COD) of the units are as under:

Unit	COD
I	1.8.2003
II	1.3.2004
III	1.11.2004
IV	1.8.2005

3. The Commission vide order dated 28.5.2013 in Petition No. 269/2009 had determined the tariff of the generating station for the period 1.4.2009 to 31.3.2014. Against the said order, the petitioner had filed Appeal No. 173/2013 and the same was disposed of by the Tribunal vide judgment dated 8.5.2014. Thereafter, the petitioner filed Petition No. 320/GT/2013 and Petition No. 208/GT/2014 for revision of tariff of generating station in terms of Regulation 6(1) of 2009 Tariff Regulations for the period from 1.4.2009 to 31.3.2014 after truing-up exercise based on actual additional capital expenditure incurred for the period 2009-14. Accordingly, the closing capital cost and the annual fixed charges for the petitioner for the period 2009-14 as determined by Commission vide order dated 26.8.2015 in Petition Nos. 320/GT/2013 and 208/GT/2014 are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	496946.86	498187.69	500571.30	503990.61	512678.89
Add: Additional Capital Expenditure	1240.83	2383.61	3419.31	8688.28	16265.06
<b>Closing Capital Cost</b>	<b>498187.69</b>	<b>500571.30</b>	<b>503990.61</b>	<b>512678.89</b>	<b>528943.95</b>
Average Capital Cost	497567.28	499379.49	502280.95	508334.75	520811.42

4. The petitioner has sought approval of tariff for 2014-19 in accordance with the provisions of the 2014 Tariff Regulations. Accordingly, the capital cost and the annual fixed charges claimed by the petitioner are as under:



## Capital Cost

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	530350.33	537912.33	551052.33	572944.33	580644.33
Add: Addition during the year/ period	7562.00	13140.00	21892.00	7700.00	23719.00
Less: De-capitalization during the year/ period	0.00	0.00	0.00	0.00	0.00
Less: Reversal during the year/ period	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year/period	0.00	0.00	0.00	0.00	0.00
<b>Closing capital cost</b>	<b>537912.33</b>	<b>551052.33</b>	<b>572944.33</b>	<b>580644.33</b>	<b>604363.33</b>
<b>Average capital cost</b>	<b>534131.33</b>	<b>544482.33</b>	<b>561998.33</b>	<b>576794.33</b>	<b>592503.83</b>

## Annual Fixed Charges

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	27669.07	28205.27	29112.64	10971.06	12223.47
Interest on Loan	2381.26	731.68	0.00	0.00	183.98
Return on Equity	32654.37	33287.18	34358.03	35262.59	36223.00
Interest on Working capital	12562.07	12716.67	12870.81	12633.61	12858.17
O&M expenses	36000.68	38274.72	40684.90	43252.23	45977.81
Compensation allowance	200.00	300.00	400.00	400.00	400.00
Special Allowance	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>111467.45</b>	<b>113515.52</b>	<b>117426.38</b>	<b>102519.48</b>	<b>107866.42</b>

5. In compliance with the directions of the Commission, the petitioner has filed additional information and has served the copies of the same on the respondents. The respondents, KSEB, TANGEDCO and GRIDCO have filed their replies and the petitioner has filed its rejoinder to the said replies. We now proceed to examine the claim of the petitioner, on prudence check, based on the submissions of the parties and the documents available on record, as stated in the subsequent paragraphs.

### Capital Cost as on 1.4.2014

6. Clause 3 of Regulation 9 of the 2014 Tariff Regulations provides as under:

*“The Capital cost of an existing project shall include the following:*

*(a) The capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;*



*(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and*

*(c) Expenditure on account of renovation and modernization as admitted by this Commission in accordance with Regulation 15.”*

7. The petitioner has claimed opening capital cost as on 1.4.2014 based on the admitted closing capital cost of ₹518916.00 lakh as on 31.3.2014 as allowed in order dated 28.5.2013 in Petition No. 269/2009. The petitioner has further adjusted the capital cost by amount ₹11351.00 lakh in accordance with the closing capital cost as on 31.3.2014 which has been worked out as ₹530350.00 lakh. The Closing Capital Cost of ₹530350.00 lakh as on 31.3.2014 claimed by the petitioner is prior to truing up of tariff based on actual additional capital expenditure for the period 2009-14.

8. The Commission vide order dated 26.8.2015 in Petition No. 320/GT/2013 and 208/GT/2014 had revised the tariff of the generating station after truing-up exercise based on the admitted closing capital cost of ₹528943.95 lakh as on 31.3.2014. The is difference in the capital cost considered by the petitioner as against those admitted as on 31.3.2014 is on account of the fact that truing-up exercise for 2009-14 was revised during the pendency of this petition for determination of tariff for the period 2014-19. The corresponding un-discharged liability is ₹3244.53 lakh (₹ 2244.99 lakh pertaining to liability as on 1.4.2009 and ₹999.53 lakh pertaining to liability added during 2009-14. The closing capital cost as admitted by the Commission as on 31.3.2014 in order dated 26.8.2015 shall be considered as opening capital cost for the determination of tariff from 1.4.2014 to 31.3.2019 in terms of the above regulation.

9. The petitioner has claimed closing capital cost of ₹5303250.00 lakh as on 31.3.2014 which is higher than the closing capital cost of ₹528943.95 lakh admitted by the Commission as on 31.3.2014. However, in terms of the above regulation, the admitted closing capital cost of ₹528943.95 lakh as on 31.3.2014 has been considered as opening capital cost as on 1.4.2014.



## Projected Additional Capital Expenditure during 2014-19

10. Clause 3 of Regulation 14 of 2014 Tariff Regulations provides as under:

*“14. Additional Capitalization and De-capitalization: (3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:*

*(i) Liabilities to meet award of arbitration or for compliance of the order or 49 decree of a court of law;*

*(ii) Change in law or compliance of any existing law;*

*(iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;*

*(iv) Deferred works relating to ash pond or ash handling system in the original scope of work;*

*(v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;*

*(vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*

*(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal/lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of 50 technology, up-gradation of capacity for the technical reason such as increase in fault level;*

*(viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;*

*(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolescence of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulators with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system;*

*(x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialization of coal supply corresponding to full coal linkage in respect of thermal*





generating station as result of circumstances not within the control of the generating station:

Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:

Provided further that any capital expenditure other than that of the nature specified above in (i) to (iv) in case of coal/lignite based station shall be met out of compensation allowance:

Provided also that if any expenditure has been claimed under Renovation and Modernization (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation.”

11. The projected additional capital expenditure claimed by the petitioner for the period 2014-19 is as under:

Sl. No	Package Name	Regulation	Projected additional capital expenditure					Total
			2014-15	2015-16	2016-17	2017-18	2018-19	
1	Work related to Ash pond/Ash handling system	14(3)(iv)	7183.00	10880.00	4352.00	2500.00	5800.00	30715.00
2	Interlocking at Exchange yard	14(3)(x)	379.00	0.00	0.00	0.00	0.00	379.00
3	Replacement of MS pipes with cast basalt pipelines and associated works	14(3)(ii)	0.00	1960.00	1866.00	0.00	0.00	3826.00
4	Installation of IP security cameras and related works towards plant safety and security	14(3)(iii)	0.00	300	0.00	0.00	0.00	300.00
5	Up-gradation of ESP of stage-II	14(3)(ii)	0.00	0.00	3750.00	3750.00	3750.00	11250.00
6	Providing fire detection & protection system in stage-II CHP	14(3)(ii) & 14(3)(iii)	0.00	0.00	159.00	0.00	0.00	159.00
7	3.5 KM MGR to Kaniha mine Signalling & Telecommunication	14(3)(x)	0.00	0.00	434.00	0.00	0.00	434.00
8	Land for left out portion of MGR	14(3)(x)	0.00	0.00	81.00	0.00	0.00	81.00
9	Wagon Tiplers and associated works	14(3)(x)	0.00	0.00	11250.00	1250.00	0.00	12500.00
10	Providing 5th pump in Ash slurry series	14(3)(iv)	0.00	0.00	0.00	200.00	400.00	600.00
11	Dry Ash transportation system	14(3)(ii)	0.00	0.00	0.00	0.00	10000.00	10000.00



12	12.5 KM MGR to Kaniha mine	14(3)(x)	0.00	0.00	0.00	0.00	3769.00	3769.00
	<b>Total</b>		<b>7562.00</b>	<b>13140.00</b>	<b>21892.00</b>	<b>7700.00</b>	<b>23719.00</b>	<b>74013.00</b>

12. The petitioner has claimed total projected additional capital expenditure of ₹ 74013.00 lakh for the period 2014-19 which comprises of ₹ 30715.00 lakh towards Ash Pond/ Ash handling system, ₹11250.00 lakh for up-gradation of ESP, ₹ 12500.00 lakh towards Wagon Tiplers, ₹1000.00 lakh towards Dry ash transportation system and the balance towards various other works i.e. Replacement of MS pipes with cast basalt, 12.5 km MGR to Kaniha mine, Interlocking at exchange yard etc. The projected additional capital expenditure claimed by the petitioner is examined in the subsequent paragraphs:

**Regulation 14 (3) (ii)**

**Replacement of MS pipes with cast basalt pipelines and associated works**

13. The petitioner has claimed projected additional capital expenditure of ₹1960.00 lakh in 2015-16 and ₹1866.00 lakh in 2016-17 towards Replacement of MS pipes with Cast Basalt pipelines and associated works under this head. In justification of the same, the petitioner has submitted that as per letter dated 12.7.2011 and 13.1.2012 of the Orissa State Pollution Control Board (OSPCB), the existing MS pipes are to be replaced with Cast Basalt pipes in order to avoid leakage and to protect the surroundings. Accordingly, the petitioner has prayed that the said expenditure may be allowed.

14. The respondent, KSEB has submitted that the additional capital claimed by the petitioner may be allowed in terms of the Regulation 14(3) of 2014 Tariff Regulations. The respondent, TANGEDCO has submitted that the expenditure claimed by the petitioner may be met from the O&M expenses allowed to the generating station. The respondent, GRIDCO has submitted that though the expenditure claimed by the petitioner is in accordance with the Comprehensive Environmental Pollution



Index (CEPI) action plan, no documentary evidence in respect of the same has been filed. It has also submitted that no additional capital may be allowed in the absence of the consent order and the application filed by the petitioner before OSPCB.

15. In compliance with the directions of the Commission vide ROP of the hearing dated 24.5.2016, the petitioner has submitted that in terms of Regulation 3(9)(d) of the 2014 Tariff Regulations, Change-in-law includes change by any competent authority in any condition or covenant of any consent and therefore the directions of OSPCB in its letters for controlling air and water pollution falls within the scope of change in law and the same is required to be complied for continuing the operation. The petitioner has further submitted that in terms of the order dated 26.8.2015, it has capitalized an amount of ₹1876.00 lakh in 2013-14. The petitioner has also submitted that it has claimed an amount of ₹1960.00 lakh in 2015-16 for Procurement and Replacement of 450 NB cast basalt pipe including construction of pedestal for support of basalt pipe and ₹1866.00 lakh in 2016-17 for Procurement of 450 NB Cast basalt pipe. It has further submitted that the gross block of MS pipes during the years 2015-16 and 2016-17 is ₹286.00 lakh and ₹349.56 lakh respectively.

16. We have examined the matter. It is noticed that OSPCB vide letter dated 12.7.2011 has granted consent to the petitioner to operate the units of generating station, subject to compliance of certain terms and conditions till 31.8.2011. Subsequently, OSPCB vide letter dated 13.1.2012 had extended the validity of consent order up to 31.3.2012 within which time the generating station was required to comply with the conditions in the consent order to keep the same valid. It is further noticed that the consent order relates to product quality, specific outlets, discharge quantity and quality, specified chimney/stack, emission quantity and quality of emissions.



17. Considering the fact that the petitioner is required to comply with the terms and conditions for Prevention and Control of Air and Water Pollution in terms of the provisions of Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act and the directions contained in the letters dated 12.7.2011 and 13.1.2012, we are inclined to allow the additional capital expenditure of ₹1674.00 lakh (₹1960.00-₹286.00 lakh) and ₹1516.44 lakh (₹1866.00-₹349.56 lakh) for the years 2015-16 and 2016-17 respectively after adjustment of the gross block of MS pipes. The petitioner is however directed to submit the valid consent order of OSPCB at the time of truing up of tariff of the generating station in terms of Regulation 8 of the 2014 Tariff Regulations.

### **Up gradation of ESP**

18. The petitioner has claimed projected additional capital expenditure of ₹3750.00 lakh each for the years 2016-17, 2017-18 and 2018-19 as regards to Up-gradation of ESP. In justification of the same, the petitioner has submitted that the emission of particulate matter from ESP stacks are required to be reduced to 50 mg/Nm<sup>3</sup> from 100mg/Nm<sup>3</sup> for which up gradation is required in compliance with the directions of OSPCB letters dated 12.7.2011 and 13.1.2012 in line with Comprehensive Environmental Pollution Index (CEPI). Accordingly, the petitioner has prayed for allowing the said expenditure under Regulation 14(3)(ii) of the 2014 Tariff Regulations.

19. The respondent, TANGEDCO has submitted that the claim of the petitioner may be disallowed in the absence of non-submission of management certificate for approval of incurring the expenditure for the period 2014-19 and also since the petitioner has claimed compensation allowance, the claim may be rejected. The respondent, GRIDCO has submitted that the claim for additional amount of ₹11250.00 lakh (₹3750.00 lakh each for the years 2016-17, 2017-18 and 2018-19) proposed for up-gradation of ESP cannot be considered due to lack of documentation on the part of



the petitioner. In response, the petitioner has submitted that the projected additional expenditure claimed is for compliance with the directions of the OSPCB in order to meet the stringent emission norms of 50mg/Nm<sup>3</sup> specified.

20. We have examined the matter. It is observed that the area around the generating station has been identified as critically polluted and therefore necessary steps are required to be taken by all stakeholders in order to implement the CEPI action plan. Accordingly, in compliance with the CEPI action plan notified by OSPCB during the year 2012, long term works of up-gradation of ESP has been proposed to be undertaken by the petitioner during the period 2016-19. Though the petitioner was directed vide ROP of the hearing dated 24.5.2016 to submit details of the emission levels of the generating station and the expected level of emission after Up-gradation of ESP, it has not furnished the same. However, considering the fact that the expenditure is incurred in compliance with the statutory guidelines of OSPCB, we are inclined to allow the projected additional capital expenditure of ₹ 3750.00 lakh each for the years 2016-17, 2017-18 and 2018-19 for Up-gradation of ESP of Stage-II under Regulation 14(3)(ii) of the 2014 Tariff Regulations. The petitioner is however directed to furnish the actual emission level of ESP during the last five years, categorically for each pass and each unit of the generating station at the time of truing up in the terms of Regulation 8 of the 2014 Tariff Regulations.

### **Dry Ash Transportation System**

21. The petitioner has claimed additional capital expenditure of ₹10000.00 lakh in 2018-19 towards Dry Ash Transportation System (DATS) for evacuation of fly ash as per Notification dated 3.11.2009 of the Ministry of Environment & Forests (MoEF), GOI as regards utilization of dry ash. In justification of the same, the petitioner has submitted that generating station is required to achieve 100% ash utilization in stipulated time frame in compliance to the said notification. It has further submitted



that Augmentation of Dry Ash Evacuation System (DAES) is required for ash utilization as the same is not sufficient to meet the requirement of the generating station. Accordingly, the petitioner has prayed that the expenditure claimed under this head may be allowed.

22. The respondent, TANGEDCO has referred to provision 1(1) and 1(6) of the said Notification dated 3.11.2009 and has submitted that the generating station should utilize the amount collected towards infrastructure facilities until it achieves 100% level. It has also stated that claim of the petitioner is not in line with the relevant provisions of the notification and therefore the expenditure claimed may not be allowed.

23. In response to the directions of the Commission vide ROP of the hearing dated 24.5.2016, the petitioner has submitted that the generating station was envisaged to commence operation during the fag end of the year 1990 and dry ash transportation system of the generating station for 25% of capacity was proposed to be installed. Accordingly, it has submitted that as per the original scope of work, dry ash transportation system of 50% capacity was available for the two units (i.e. 25% of station capacity) for the generating station. The petitioner has further pointed out that OSPCB in its letter dated 12.7.2011 has directed that “...*the industry shall plan and implement appropriate actions to comply with the provisions of Fly Ash Notification 2009.....*”.Accordingly, the petitioner has prayed that additional capital expenditure claimed under this head may be allowed.

24. We have examined the matter.It is observed that the notification dated 3.11.2009 of MoEF, GOI provides that all coal/lignite based thermal stations would be free to sell the fly ash to user agencies subject to certain conditionsandthe amount collected from sale of fly ash or fly ash based products should be kept in a separate account head and shall be utilized only for development of infrastructure or facilities, promotion and



facilitation activities for use of fly ash until 100% fly ash utilization level is achieved. Since the expenditure is required for compliance with the guidelines with MoEF guidelines dated 3.11.2009 and is for achieving 100% ash utilization targets as per the said notification, we are inclined to allow the prayer of the petitioner. Moreover, the DATS shall also help in reducing the burden of ash disposal in the ash dyke area which will reduce the regular or time to time capitalization of expenditure for raising of ash dyke and environmental ground water pollution. In this background and since the expenditure is for compliance with the existing norms under the MoEF notification, the additional capital expenditure for DATS is allowed under Regulation 14(3)(ii) of the 2014 Tariff Regulations. However, the petitioner is directed to furnish the details of revenue earned from sale of fly ash (excluding transportation charges if any paid by the petitioner) and a copy of account duly certified by the auditor, which is mandatorily have to be maintained by the petitioner as per the said notification and the same shall be considered at the time of truing up of tariff in terms of Regulation 8 of the 2014 Tariff Regulations.

### **Fire detection and Protection system**

25. The petitioner has claimed projected additional capital expenditure of ₹ 159.00 lakh in 2016-17 towards fire detection and protection system. In justification of the same, the petitioner has submitted that fire detection and protection system is required to be installed for safety and security in compliance with the Central Electricity Authority (Technical standards for construction of Electric plants and lines), Regulations, 2010 and the Central Electricity Authority (Safety Requirements for Construction, Operation and Maintenance of Electrical Plants and Electrical Lines) Regulations, 2011 (hereinafter called the "CEA Regulations 2010 and 2011"). Accordingly, the petitioner has prayed that the said additional capital expenditure may be allowed.



26. The respondents, TANGEDCO has submitted that the claim of the petitioner under this head may be met out of Compensation Allowance provided to the generating station under Regulation 17(2) of the 2014 Tariff Regulations. It has further submitted that no details have been furnished by the petitioner as regards to the functioning of existing fire detection devices installed in the generating station. The respondent, GRIDCO has submitted that the said CEA Regulations do not apply to the generating station as they provide technical standards for construction of electrical plants and not for already constructed ones. In response, the petitioner has clarified that the above mentioned Regulations are applicable to both new as well as existing power plants and hence the expenditure may be allowed.

27. We have examined the matter. It is observed that similar claim of the petitioner under Regulations 14(3)(ii) and 14(3)(iii) of the 2014 Tariff Regulations for Augmentation of Fire fighting system was considered by the Commission in Petition No. 270/GT/2014 (tariff of Simhadri STPS for 2014-19) and the Commission by order dated 27.6.2016 had rejected the claim of the petitioner. On a review filed by the petitioner (in Petition No.36/RP/2016), the Commission by order dated 27.1.2017 allowed the prayer of the petitioner under Regulation 14(3)(iii) of the 2014 Tariff Regulations. The petitioner in this petition has claimed the expenditure due to Change in law/compliance with existing law under Regulation 14(3)(ii) and for Safety and security of the plant under Regulation 14(3)(iii) of the 2014 Tariff Regulations in terms of the CEA Regulations 2010 and 2011. Though the prayer of the petitioner in the review petition was not allowed under Regulation 14(3)(ii) of the 2014 Tariff Regulations, the Commission is of the view that the matter needs to be examined in the larger perspective i.e whether the CEA Regulations 2010 and 2011 are applicable to the existing generating stations and if so, whether the implementation of the augmentation of fire fighting system should be considered as Change in law and is





required for Safety and security of the plant in terms of Regulation 14(3)(ii) and (iii) of the 2014 Tariff Regulations. Accordingly, the Commission has decided to consult the CEA in this regard. Therefore, the Staff of the Commission is directed to refer the matter to CEA for necessary clarification. Pending clarification in the matter, the claim of the petitioner has not been decided in this order. If on the basis of the report of the CEA, the Commission comes to a decision to allow the expenditure for augmentation of fire fighting/protection system under Change in law and for Safety and security of the plant, and in that event, the claim of the petitioner shall be considered at the time of truing-up of tariff in terms of Regulation 8 of the 2014 Tariff Regulations. The petitioner shall also place on record the confirmation that the expenditure on augmentation of fire fighting system/protection system is in compliance with the TAC guidelines and the discount, if any, received from the Insurance companies at the time of truing-up.

### **Regulation 14 (3) (iii)**

#### **Installation of IP security cameras and related works towards plant safety and security**

28. The petitioner has claimed additional capital expenditure of ₹300.00 lakh in 2015-16 for Installation of IP security cameras and related works. In justification of the same, the petitioner has submitted that Ministry of Home Affairs (MoHA), GOI vide letter dated 3.12.2011 has directed for installation of IP security cameras at various locations of the generating station in view of its safety and security concerns and hence it may be allowed.

29. The respondent, TANGEDCO has submitted that the said expenditure is minor in nature and can be met from the Compensation Allowance admissible to the generating station. It has further submitted that the Commission vide order dated 20.5.2015 in Petition No. 260/GT/2013 had disallowed the similar claim of the petitioner in respect of Dadri stage-I GPS of the petitioner. Accordingly, the



respondent has prayed that the expenditure of ₹300.00 lakh in 2015-16 may be disallowed. In response, the petitioner has clarified that the projected expenditure has been claimed as per the directions of CISF.

30. We have examined the matter. It is noticed that Regulation 14(3)(iii) of the 2014 Tariff Regulations provides for considering the expenditure for security or safety of the plant based on the advice or direction of statutory authorities responsible for national security/ internal security. Keeping in view the present security scenario of the country and in order to modernize the security system and installation of modern electronic gadget, Ministry of Home Affairs, GOI vide letter dated 3.12.2011 has directed for installation of IP security cameras at various locations of the generating station and the installation of cameras are for internal security and safety of the plant from outside agencies/ elements. In this background, the additional capital expenditure of ₹300.00 lakh in 2015-16 is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.

### **Regulation 14 (3) (iv)**

#### **Ash Pond/ Ash handling Work**

31. The petitioner has claimed additional capital expenditure of ₹7183.00 lakh in 2014-15, ₹10880.00 lakh in 2015-16, ₹4352.00 lakh in 2016-17, ₹2500.00 lakh in 2017-18 and ₹5800.00 lakh in 2018-19 for works of Ash dyke raising and associated works. In justification of the same, the petitioner has submitted that the projected additional capital expenditure is for planned works relating to Ash handling and Ash pond related works which are of continuous nature during the operational life of the generating station and is covered within the original scope of the project. Accordingly, the petitioner has prayed that the additional capital expenditure claimed may be allowed.

32. The respondent, TANGEDCO has submitted that in terms of the MoEF, GOI Notification dated 3.11.2009 the expenditure on account of evacuation of ash is to be



met by the revenue generated from the sale of Ash. Accordingly, it has submitted that the petitioner may be directed to provide the quantum of ash generated and the quantum sold for prudence check of the Commission. In response, the petitioner has clarified that no revenue is generated from sale of fly ash in the generating station. The respondent, GRIDCO has submitted that the work contemplated by the petitioner in raising ash dyke for ash disposal, ash pond work is not a deferred work but a continuous process during the entire operational life time of the generating station and hence it is an O&M expense for which an increased work is provided under the 2014 Tariff Regulations. It has further submitted that no documentary evidence has been submitted by the petitioner for claiming the said expenditure.

33. The Commission, vide ROP of the hearing dated 24.5.2016 had directed the petitioner to file additional information with regard to the additional capital expenditure of ₹307.15 crore during the period 2014-19 towards work related to Ash pond and in response the petitioner has submitted that the proposed expenditure of ₹307.15 crore is for 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup> & 7<sup>th</sup> raising of Lagoon 1 and Lagoon 2 along with peripheral filling. It has further submitted that 40% of ash (approx.) is utilized at the generating station as a whole and dyke raising constitute a major part of ash utilization (95%) and the balance 5% is utilized in brick industries including ash brick plant for Talcher STPS and asbestos industries. It has further clarified that a revenue of ₹0.046 crore has been generated from sale of ash since the COD of the generating station till 31.3.2014.

34. The matter has been examined. It is observed from the submissions of the petitioner that the projected expenditure towards Ash dyke raising is for planned works related to ash pond/ ash handling system which is of continuous nature during the operational life of generating station. Moreover, the works for which the expenditure has been claimed is as per approved scheme under the original scope of work. It is



observed that the petitioner had capitalized an expenditure of ₹151.18 crore towards Ash dyke works for the period from 1.8.2005 to 31.3.2014 and in this background the claim of the petitioner for the period 2014-19 appears to be on higher side. In the absence of comparison of the cost with similar work undertaken by the petitioner, the reasonableness of the estimated cost from the break-up of proposed ash dyke works during the period 2014-19 as submitted by the petitioner, cannot be worked out. Moreover, when the capitalization of ₹10000.00 lakh for dry Fly Ash extraction system has been proposed in 2018-19, the reason for capitalization of the said amount for 7<sup>th</sup> raising in 2018-19 is also not understood, more so, when a major portion of ash (80%approx.) generated has been disposed of in dry form. In this background, we are inclined to restrict the proposed additional capital expenditure to ₹115.98 crore which was allowed during the period 2009-14, with an annual escalation of 6.35% each year during the period 2014-19. This works out to ₹15578.68 lakh. Considering the capitalization submitted by the petitioner, this amount is pro-rated each year and accordingly the same works out to ₹3689.99 lakh in 2014-15, ₹5589.19 lakh in 2015-16, ₹2235.68 lakh in 2016-17, ₹1284.28 lakh in 2017-18 and ₹2979.54 lakh in 2018-19. The petitioner is however directed to submit the details of work orders along with complete scope of work of ash handling system, estimated cost, and actual cost incurred along with documentary proof at the time of truing up exercise in terms of Regulation 8 of the 2014 Tariff Regulations. The petitioner is also directed to furnish a certificate to the effect that Ash pond & Ash handling related works executed pertains to generating station only and no part of work is related to Stage-I.

### **5<sup>th</sup> pump in Ash slurry series**

35. The petitioner has claimed additional capital expenditure of ₹200.00 lakh in 2017-18 and ₹400.00 lakh in 2018-19 under Regulation 14(3)(iv) towards provision for 5th pump in Ash Slurry Headers. In justification of the same, the petitioner has submitted



that a provision for 5<sup>th</sup> pump in Ash slurry series was kept in the original scope of work, which is required to be provided eventually with the planned raising of Ash dykes.

36. The respondent, TANGEDCO has submitted that the claim of the petitioner may be negated as the details regarding volume of ash generated and quantity of ash disposed by the existing pumps has not been submitted by the petitioner. In response, the petitioner has submitted that the 5<sup>th</sup> pump in Ash Slurry series was not commissioned earlier in order to avoid tariff burden on the beneficiaries.

37. The matter has been examined. It is observed that the 5<sup>th</sup> pump in Ash slurry series is required to handle the increased pumping head of ash slurry pumps consequent to raising of ash dykes and is as per approved scheme within the original scope of work relating to ash pond or ash handling system. The work relating to ash dyke raising and associated work of ash handling system form part of the original approved scope of work and are normally undertaken in stages as and when required during the life of the generating station. In this background, the expenditure incurred under this head is allowed under Regulation 14(3)(iv) of the 2014 Tariff Regulations.

### **Regulation 14 (3) (x)**

#### **Interlocking at Exchange yard**

38. The petitioner has claimed additional capital expenditure of ₹379.00 lakh in 2014-15 in respect of the work of Interlocking at exchange yard. In justification of the same, the petitioner has submitted that the execution of the work got delayed by East Coast Railways even though the same was approved by the Commission in order dated 28.5.2013 in Petition No. 269/2009 in 2011-12. It has further submitted that the expenditure form part of the ongoing works and is required for safety of rakes and for reduction of time to increase coal receipt without the need of banking of Locos and hence the said expenditure claimed may be allowed to be capitalized during the period 2014-19.



39. The respondent, TANGEDCO has submitted that the claim under this head ought to be disallowed as the expenditure allowed earlier has not been utilized judiciously.

40. The matter has been examined. It is observed that the said work form part of the original scope of work and the Commission vide order dated 28.5.2013 in Petition No. 269/2009 had approved the capitalization of this work in 2011-12. In this background and considering the fact that the expenditure is linked to MGR system and is required for safety of railway rakes, reduction of time to increase coal receipt without the need of banking of locos, we are inclined to allow the expenditure of ₹ 379.00 lakh claimed in 2014-15 under this head.

### **3.5 Km MGR to Kaniha mine, Signalling and Telecommunication**

41. The petitioner has claimed additional capital expenditure of ₹434.00 lakh towards Signalling and Telecommunication at 3.5 km MGR to Kaniha Mines. In justification of the same, the petitioner has submitted that works related to 3.5 Km MGR to Kaniha mines was allowed by the Commission in order dated 28.5.2013 in Petition No. 269/2009 during the period 2009-14 under Regulations 9(2)(vii).

42. The respondent, TANGEDCO has submitted that the petitioner has not furnished any details related to 3.5 km MGR to Kaniha Mines and that he may be directed to furnish the same. In response of the above, the petitioner has clarified that the auditor's certificate for actual capital expenditure towards the said work for the period 2009-14 has been submitted.

43. The matter has been examined. The Commission in order dated 26.8.2015 in Petition No. 320/GT/2013 while allowing the claim of the petitioner for 3.5 Km MGR-Kaniha Mines had observed as under:-

*“It is observed that the MGR package was awarded in 2004 at a value of ₹ 767.00 lakh and there was substantial delay in the development of Kaniha mines. Accordingly, the work could be started only in the year 2011 matching with the*



*schedule for development of Kaniha mines. Further, due to MORTH specification for re-grading of road subsequent to the declaration of captive road of NTPC as National Highway by NHAI, there has been additional work like re-grading of road up to a distance of 1 Km, widening of road, construction of culvert in the captive road declared as National Highway. Thus, due to the high inflationary period and as the development of National Highway as per the MORTH specification did not emerge at the time of original projection; there is difference between the projected and the actual expenditure. Therefore, the claim of the petitioner is justified. In view of this, the actual expenditure of ₹2355.00 lakh in 2012-13 and ₹378.00 lakh in 2013-14 is in order and is allowed under Regulation 9(2) (vii) of the 2009 Tariff Regulation.”*

44. It is noticed that the work for MGR lines to Kaniha Mines has got delayed due to delay in the development of Kaniha mines and accordingly the signalling and telecommunication activities could not be started by the petitioner. It is observed that the work of signalling and telecommunication is within the original scope of work of the project and forms an integral part of MGR system. Accordingly, we are inclined to allow the additional capital expenditure of ₹434.00 lakh in 2016-17 for the said work.

#### **Land for left out portion of MGR and 12.5 km MGR to Kaniha Mines**

45. The petitioner has claimed additional capital expenditure of ₹81.00 lakh in 2016-17 towards Land for left out portion of MGR and ₹3769.00 lakh towards work of 12.5 km MGR to Kaniha Mines. In justification of the same, the petitioner has submitted that the expenditure was allowed by the Commission in order dated 28.5.2013 in Petition No. 269/2009 during the period 2009-14. It has also submitted that the work could not be started due to delay in the process of land acquisition, the same being private land and the Govt. of Orissa is yet to disburse the amount to the land owners. Accordingly, the petitioner has prayed for grant of the said expenditure.

46. The matter has been examined. The Commission vide order dated 28.5.2013 in Petition No. 269/2009 had allowed an expenditure of ₹ 600.00 lakh and ₹3769.00 lakh towards Land for left out portion of MGR and 12.5 km MGR to Kaniha mines respectively during the period 2009-14. Thereafter the Commission vide order dated 26.8.2015 in Petition No. 320/GT/2013 had allowed the actual additional capital expenditure of ₹60.00 lakh in 2011-12, ₹9.00 lakh in 2012-13 and ₹451.00 lakh in



2013-14 (i.e. total ₹520.00 lakh) during the period 2009-14 out of the expenditure towards Land for left out portion of MGR. Since, the total amount claimed by the petitioner under this headform part of the expenditure allowed and the work has been delayed due to delay in land acquisition required for MGR system by Govt. of Odisha, we are inclined to allow the additional capital expenditure claimed under this head.

### **Wagon Tipplers and associated works**

47. The petitioner has claimed additional capital expenditure of ₹11250.00 lakh in 2016-17 and ₹1250.00 lakh in 2017-18 towards Wagon Tipplers and associated works. In justification of the same, the petitioner has submitted that the coal field is not able to meet the supply of coal up to FSA quantity and therefore, the generating station is dependent on Railways through BOBR wagons for extra coal. It has also submitted that Railways is planning to phase out BOBR rakes and use only BOXN wagon rakes. Accordingly, it has prayed that the said expenditure may be allowed in order to carry out the works in environment friendly manner.

48. The respondent, TANGEDCO had submitted that the arrangement of fuel is generator's responsibility and that the generating station can meet the expenditure from O&M expenses allowed to the generating station. In response, the petitioner has submitted that appropriate steps to deal with the problems of the fuel shortage has been taken and due to delay in unloading BOXN type wagons, the total receipt of coal reduces in the absence of wagon tippler.

49. The matter has been examined. Though the petitioner has submitted that the Railways has been planning to phase out BOBR rakes, no documentary evidence has been furnished by the petitioner with regards to the same. It has also submitted that it has been receiving only 14.5 MTPA in place of 17.5 MTPA from MCL mines and the remaining coal is being met by importing coal as well as other domestic sources and Wagon tipplers are required to receive coal through rakes of Indian Railways which





are in BOX-N types of wagons. However, from the data furnished by the petitioner considering 85% Availability, Station Heat rate of 2375 kCal/kWh and as fired GCV of coal of 3127.66 kCal/kg (in the absence of as received GCV) in terms of the 2014 Tariff Regulations, the annual requirement of coal for the generating station is found to be 11.29 MTPA. Even if 100% availability is considered, the annual coal requirement of the generating station would be 13.28 MTPA (approx.) which is lower than 14.5 MTPA as submitted by the petitioner. In view of this, we are of the considered view that the petitioner has not made out a fit case to allow the additional capital expenditure towards Wagon Tiplers and associated works. Accordingly, the claim of the petitioner under this head is not allowed.

50. Based on the above discussions, the projected additional capital expenditure allowed during the period 2014-19 is summarized as under:

(₹ in lakh)

Sl. No		Projected Capital expenditure					Total
		2014-15	2015-16	2016-17	2017-18	2018-19	
1	Work related to Ash pond/Ash handling system	3689.99	5589.19	2235.68	1284.28	2979.54	15778.68
2	Interlocking at Exchange yard	379.00	0.00	0.00	0.00	0.00	379.00
3	Replacement of MS pipes with cast basalt pipelines and associated works	0.00	1674.00	1516.44	0.00	0.00	3190.44
4	Installation of IP security cameras and related works towards plant safety and security	0.00	300	0.00	0.00	0.00	300.00
5	Up gradation of ESP of stage-II	0.00	0.00	3750.00	3750.00	3750.00	11250.00
6	Providing fire detection & protection system in stage-II CHP	0.00	0.00	0.00	0.00	0.00	0.00
7	3.5 KM MGR to Kaniha mine Signalling & Telecommunication	0.00	0.00	434.00	0.00	0.00	434.00
8	Land for left out portion of MGR	0.00	0.00	81.00	0.00	0.00	81.00
9	Wagon Tiplers and associated works	0.00	0.00	0.00	0.00	0.00	0.00



10	Providing 5th pump in Ash slurry series	0.00	0.00	0.00	200.00	400.00	600.00
11	Dry Ash transportation system	0.00	0.00	0.00	0.00	10000.00	10000.00
12	12.5 KM MGR to Kaniha mine	0.00	0.00	0.00	0.00	3769.00	3769.00
	<b>Total</b>	<b>4068.99</b>	<b>7563.19</b>	<b>8017.12</b>	<b>5234.28</b>	<b>20898.54</b>	<b>45782.12</b>

51. Accordingly, the capital cost allowed for the purpose of tariff is as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	528943.95	533012.94	5400576.13	548593.25	553827.53
Add: Addition during the year/ period	4068.99	7563.19	8017.12	5234.28	20898.54
Less: De- capitalization during the year/ period	0.00	0.00	0.00	0.00	0.00
Less: Reversal during the year/ period	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year/ period	0.00	0.00	0.00	0.00	0.00
<b>Closing Capital Cost</b>	<b>533012.94</b>	<b>540576.13</b>	<b>548593.25</b>	<b>553827.53</b>	<b>574726.07</b>
<b>Average capital Cost</b>	<b>530978.44</b>	<b>536794.53</b>	<b>544584.69</b>	<b>551210.39</b>	<b>564276.80</b>

### Debt- Equity ratio

52. Regulation 19 of the 2014 Tariff Regulations provides that-

*(1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*

*Provided that:*

*(i) where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*

*(ii) the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*

*(iii) any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt-equity ratio.*

*Explanation - The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.*

*(2) The generating Company or the transmission licensee shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilisation made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.*



(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.

(4) In case of generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.

53. Accordingly, gross normative loan and equity amounting to ₹370260.76 lakh and ₹158683.18 lakh respectively as on 31.3.2014 as considered in order dated 26.8.2015 and corrigendum order dated 16.10.2015 has been considered as gross normative loan and equity as on 1.4.2014. Further the additional capital expenditure approved above has been allocated in debt- equity ratio of 70:30.

### **Return on Equity**

54. Regulation 24 of the 2014 Tariff Regulations provides as under:

*“(24) Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.*

*(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of river hydro generating stations, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:*

*Provided that*

*i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:*

*(ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:*

*(iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:*

*(iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:*



- (v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:
- (vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.

55. Regulation 25 of the 2014 Tariff Regulations provides that:

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non-generation or non-transmission business, as the case may be) shall not be considered for the calculation of "effective tax rate".

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess.

Illustration:

(i) In case of the generating company or the transmission licensee paying minimum Alternate tax (MAT) @ 20.96% including surcharge and cess:

$$\text{Rate of return on equity} = 15.50 / (1 - 0.2096) = 19.610\%$$

(ii) In case of generating company or the transmission licensee paying normal corporate tax including surcharge and cess:

(a) Estimated Gross Income from generation or transmission business for FY 2014-15 is ₹ 1000 Cr

(b) Estimated Advance tax for the year on above is ₹ 240 Cr

(c) Effective tax rate for the year 2014-15 = ₹ 240 Cr / ₹ 1000 Cr = 24%

(d) Rate of Return on Equity =  $15.50 / (1 - 0.24) = 20.395\%$

(iii) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2014-15 to 2018-19 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after trueing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/ DICs as the case may be on year to year basis.



56. The petitioner has claimed Return on Equity considering the base rate of 15.5% and effective tax rate of 23.939%. However, in terms of order dated 27.6.2016 in Petition No. 270/GT/2014, the effective tax Rate (MAT) of 20.961% has been considered for 2014-15 and 21.342% from the year 2015-16 onwards till the year 2018-19 for the purpose of grossing up of base rate of 15.5%. Based on the above, the rate of ROE works out to 19.610% for 2014-15 and 19.705% for 2015-16 onwards. Accordingly, return on equity is as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Normative Equity- Opening	158683.18	159903.88	162172.84	164577.97	166148.26
Addition to equity on account of additional capitalization	1220.70	2268.96	2405.14	1570.28	6269.56
Normative Equity- Closing	159903.88	162172.84	164577.97	166148.26	172417.82
Average Normative Equity	159293.53	161038.36	163375.41	165363.12	169283.04
Rate of return on Equity (Base rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective tax Rate	20.961%	21.342%	21.342%	21.342%	21.342%
Rate of Return on Equity (pre tax)	19.610%	19.705%	19.705%	19.705%	19.705%
<b>Return on Equity ( Pre Tax)- Annualized</b>	31237.46	31732.61	32193.12	32584.80	33357.22

### Interest on Loan

57. Regulation 26 of the 2014 Tariff Regulations provides as under:

*“26. Interest on loan capital: The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*

*(1) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*

*(2) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered up to the date of de-capitalization of such asset.*

*(3) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*

*(4) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*



*Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered*

*Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*

*(5) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*

*(6) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.*

*(7) The changes to the terms and conditions of the loans shall be reflected from the date of such refinancing.*

*(8) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:*

*Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan”*

58. The interest on loan has been worked out as mentioned below:

- i) As stated above, gross normative loan amounting to ₹ 370260.76 lakh has been considered as on 1.4.2014
- ii) Cumulative repayment amounting to ₹ 329591.39 lakh as on 31.3.2014 as considered in order dated 26.8.2015 has been considered as on 1.4.2014.
- iii) Accordingly, the net normative opening loan as on 1.4.2014 works out to ₹ 40669.38 lakh
- iv) Addition to normative loan on account of admitted additional capital expenditure has been considered.
- v) Depreciation allowed has been considered as repayment of normative loan during the respective year of the tariff period 2014-19.
- vi) In line with the provisions of the above regulation, the weighted average rate of interest has been calculated applying the actual loan portfolio existing as on 1.4.2014 along with subsequent additions during the period 2014-19, if any, for the generating station. In case of loans carrying floating rate of





interest, the rate of interest as furnished by the petitioner is considered for the purpose of tariff.

59. The necessary calculation for Interest on loan is as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative loan-Opening	370260.76	373109.06	378403.29	384015.27	387679.27
Cumulative repayment of loan up to previous year/period	329591.39	357097.20	378403.29	384015.27	387679.27
Net Normative Loan-Opening	40669.38	16011.85	0.00	0.00	0.00
Addition to Normative loan on account of additional capitalization	2848.29	5294.23	5611.98	3664.00	14628.98
Repayment of loan during the year	27505.82	21306.09	5611.98	3664.00	10319.56
Net Loan closing	16011.85	0.00	0.00	0.00	4309.42
Average loan	28340.62	8005.93	0.00	0.00	2154.71
Weighted average Rate of Interest on Loan	8.1752%	8.1574%	8.1731%	8.2561%	8.4013%
<b>Interest on Loan</b>	<b>2316.91</b>	<b>653.07</b>	<b>0.00</b>	<b>0.00</b>	<b>181.02</b>

## Depreciation

60. Regulation 27 of the 2014 Tariff Regulations provides as under:

*“27.(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.*

*Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.*

*(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis*

*(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:*

*Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:*



*Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long term power purchase agreement at regulated tariff:*

*Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.*

*(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.*

*(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system:*

*Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets*

*(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2014 from the gross depreciable value of the assets.*

*(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.*

*(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services.”*

61. Accordingly, the cumulative depreciation of ₹297792.98 lakh as on 31.3.2014 as considered in order dated 26.8.2015 and corrigendum order dated 16.10.2015 has been retained for the purpose of tariff. Further, the value of freehold land, if any, included in the average capital cost has been adjusted while calculating depreciable value for the purpose of tariff. Accordingly, the balance depreciable value for the year 2014-15 works out to ₹179358.16 lakh. Since as on 1.4.2014, the used life of the generating station (i.e 9.71 years) is less than 12 years from the effective station COD of 16.7.2004, depreciation has been calculated by applying weighted average rate of depreciation for the period 2014-17 and for the period 2017-19 depreciation has been calculated by spreading off the balance depreciable value over the remaining useful life of the generating station. The petitioner has claimed depreciation considering weighted average rate of depreciation of 5.1802% for the period 2014-17, and





accordingly the same has been considered. Depreciation has been computed as under:

	(₹in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Average Capital Cost	530978.44	536794.53	544584.69	551210.39	564276.80
Freehold land included above	810.51	810.51	810.51	810.51	810.51
Depreciable value @ 90%	477151.14	482385.62	489396.76	495359.89	507119.66
Remaining useful life at the beginning of the year	15.29	14.29	13.29	12.29	11.29
Balance depreciable value	179358.16	157086.83	136290.87	114043.35	116525.01
<b>Depreciation (Annualized)</b>	<b>27505.82</b>	<b>27807.10</b>	<b>28210.65</b>	<b>9278.10</b>	<b>10319.56</b>
Cumulative depreciation at the end	325298.79	353105.90	381316.54	390594.65	400914.21

### Operational Norms

62. The operational norms in respect of the generating station considered by the petitioner are as under:

Target Availability (%)	83
Heat Rate (kcal/kwh)	2375.0
Auxiliary Power Consumption (%)	5.75
Specific Oil Consumption (ml/kwh)	0.50

### Target Availability

63. The Target Availability specified under the 2014 Tariff Regulations is as follows:

*“(a) All Thermal generating stations, except those covered under clauses (b) (c) (d) &(e)- 85%.*

*Provided that in view of the shortage of coal and uncertainty of assured coal supply on sustained basis experienced by the generating stations, the NAPAF for recovery of fixed charges shall be 83% till the same is reviewed.*

*The above provision shall be reviewed based on actual feedback after 3 years from 01.04.2014.”*

64. The petitioner has considered the Target Availability of 83% during the period 2014-19. The Commission due to shortage of domestic coal supply has relaxed Target Availability to 83% for first 3 years from 1.4.2014 and the same shall be reviewed after 3 years. In terms of the above Regulation, the Target Availability of 83% has been allowed for the period 2014-15 to 2016-17 and 85% for the period 2017-18 & 2018-19 as per Regulation 36(A) of 2014 Tariff Regulations.



### **Heat Rate (kcal/kwh)**

65. Regulation 36(C)(a) of 2014 Tariff Regulations provides the Gross Station Heat Rate of 2375 kCal/kWh for existing coal based thermal generating station of 500 MW sets whose COD is before 1.4.2009. The COD of the generating station is 1.8.2005 and accordingly, the Heat rate considered by the petitioner is as per norms and is allowed.

### **Auxiliary Energy Consumption**

66. Regulation 36(E)(a) of Tariff Regulations, 2014 provides Auxiliary Energy Consumption of 5.25% for coal based generating station of 500 MW sets with Natural Draft cooling tower. Further, for thermal generating stations with induced draft cooling towers, the norms shall be further increased by 0.5%. Accordingly, the Auxiliary Energy Consumption of 5.75% considered by the petitioner is as per norms and is allowed.

### **Specific Oil Consumption**

67. Regulation 36(D)(a) of Tariff Regulations, 2014 provides Secondary fuel oil Consumption of 0.50 ml/kWh for coal-based generating station. Accordingly, the Secondary fuel oil consumption of 0.5 ml/kWh considered by the petitioner is as per norms and is allowed.

### **Operation & Maintenance expenses**

68. Regulation 29 (1) (c) of 2014 Tariff Regulation provides the O&M expense norms claimed for the generating station as under:

*(₹ in lakh)*

2014-15	2015-16	2016-17	2017-18	2018-19	Total
32000	34020	36160	38440	40860	181480

69. The petitioner has claimed year-wise O&M expenses comprising of Normative O&M and Water Charges. The claim for O&M expenses, including water charges, is



found to be in order in terms of the decision of the Commission in its order dated 6.10.2015 in Petition No. 186/GT/2014 (determination of tariff of Sugden CCPP (1147.5 MW) of Torrent Power Limited for 2014-19). The normative O&M expenses claimed by the petitioner under Regulation 29(1) of the 2014 Tariff Regulations is found to be in order and accordingly allowed.

### **Interest on Working Capital**

70. Regulation 28 of 2014 Tariff Regulations provides that:

*(1) The working capital shall cover:*

*(a) Coal based/ lignite-fired thermal generating stations:*

*(i) Cost of coal or lignite and limestone towards stock, if applicable, for 15 days for pit-head generating stations and 30 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower*

*(ii) Cost of coal or lignite and limestone for 30 days for generation corresponding to the normative annual plant availability factor;*

*(iii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil*

*(iv) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 29;*

*(v) Receivables equivalent to two months of capacity charges and f for sale of electricity calculated on the normative annual plant availability factor; and*

*(vi) Operation and maintenance expenses for one month.*

*(2) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1<sup>st</sup> April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later.*

*(3) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency."*

### **Fuel Components and Energy Charges in working capital**

71. The petitioner has claimed the cost for fuel component in working capital based on price and 'as fired' GCV of coal procured and burnt for the preceding three months



of January, 2014, February, 2014 and March, 2014 and secondary fuel oil the preceding three months of January, 2014, February, 2014 and March, 2014, as under:

	<i>(₹ in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Cost of Coal for Stock for 15 days	9021.51	9046.23	9021.51	9021.51	9021.51
Cost of Coal for Generation for 30 days	18043.02	18092.45	18043.02	18043.02	18043.02
Cost of Secondary fuel oil 2 months	578.50	580.09	578.50	578.50	578.50

72. The Commission vide ROP of the hearing dated 27.2.2015 in Petition No. 283/GT/2014 had directed the petitioner to submit the GCV of coal on 'as received' basis. In compliance to the directions, the petitioner vide affidavit dated 4.6.2015 has submitted that they did not have suitable infrastructure for measurement of representative GCV on 'as received' basis. In response, the respondent has submitted that the Energy Charge Rate (ECR) of generating station is required to be calculated in accordance with the 2014 Tariff Regulations. It has also submitted that the petitioner may realize that the substantial change in ECR would ultimately impact the Merit order Dispatch (MOD) principle.

73. The issue of "as received" GCV for computation of Energy Charges was challenged by NTPC and other generating companies through writ petition in the High Court of Delhi. The writ petition was heard and Delhi High Court had directed that the Commission shall decide the place from where the sample of coal should be taken for measurement of GCV of coal on as received basis within 1 month on the request of petitioners.

74. As per the directions of the Hon'ble High Court, the Commission vide order dated 25.1.2016 in Petition No. 283/GT/2014 has decided as under:

*"58. In view of the above discussion, the issues referred by the Hon'ble High Court of Delhi are decided as under:*

*"(a) There is no basis in the Indian Standards and other documents relied upon by NTPC etc. to support their claim that GCV of coal on as received basis should be*



*measured by taking samples after the crusher set up inside the generating station, in terms of Regulation 30(6) of the 2014 Tariff regulations.*

*(b) The samples for the purpose of measurement of coal on as received basis should be collected from the loaded wagons at the generating stations either manually or through the Hydraulic Auger in accordance with provisions of IS 436(Part1/Section1)-1964 before the coal is unloaded. While collecting the samples, the safety of personnel and equipment as discussed in this order should be ensured. After collection of samples, the sample preparation and testing shall be carried out in the laboratory in accordance with the procedure prescribed in IS 436(Part1/Section1)-1964 which has been elaborated in the CPRI Report to PSERC.”*

75. Further, the petitioner has claimed an Energy Charge Rate (ECR) of 160.511 Paise/kWh based on the weighted average price, GCV of coal (as fired basis) & Oil procured and burnt for the preceding three months. It is observed that the petitioner has not placed on record the GCV of coal on ‘as received’ basis though the petitioner was statutorily required to furnish such information with effect from 1.4.2014. In compliance with the direction of the Hon’ble High Court of Delhi, the Commission in its order dated 25.1.2016 in Petition No. 283/GT/2014 has clarified that the measurement of GCV of coal on as received basis shall be taken from the loaded wagons at the unloading point either manually or through the Hydraulic Augur. The petitioner has not submitted the required data regarding measurement of GCV of coal in compliance with the directions contained in the said order dated 25.1.2016. The present petition cannot be kept pending till the petitioner submits the required information. Accordingly, the Commission has decided to compute the energy charges by provisionally taking the GCV of coal on as ‘billed basis’ and allowing on adjustment for inherent moisture as per the formula given as under:

$$\frac{\text{GCV} \times (1 - \text{TM})}{(1 - \text{IM})}$$

Where: GCV=Gross Calorific value of coal  
TM=Total moisture  
IM= Inherent moisture

76. In view of the above, the cost for fuel components in working capital have been computed at 83% NAPAF for the years 2014-15, 2015-16 and 2016-17 and at 85%



NAPAF for the year 2017-18 & 2018-19 and based on 'as billed' GCV of coal and price of coal procured and secondary fuel oil for the preceding three months from January, 2014 to March 2014 and allowed as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal for stock-15 Days	6795.37	6795.37	6795.37	6959.11	6959.11
Cost of Coal for Generation-30 Days	13590.74	13590.74	13590.74	13918.22	13918.22
Cost of Secondary fuel oil 2 months	578.50	580.09	578.50	592.44	592.44

77. The GCV of coal as computed above shall be adjusted in the light of GCV of coal on 'as received' basis computed by the petitioner in accordance with the direction in order dated 25.1.2016 in Petition No. 283/GT/2014. The Energy Charge Rate (ECR) based on operational norms under 2014 Tariff Regulation and on 'as billed' GCV of coal for preceding 3 months (January 2014 to March 2014) is worked out as under:

Sl. No.		Unit	2014-19
1	Capacity	MW	2000
2	weighted average Gross Station Heat Rate	Kcal/kWh	2375
3	weighted average Aux. Energy Consumption	%	5.75
4	Weighted average GCV of oil (As fired)	Kcal/lit	9510
5	Weighted average GCV of Coal (As Billed)	Kcal/kg	4095.156
6	Adjustment on account of coal received at the generating station for equilibrated basis (Air dried) in the billed GCV of Coal India		*
7	Weighted average price of oil	₹/KL	47739.24
8	Weighted average price of Coal	₹/MT	1964.62
9	<b>Rate of energy charge ex-bus</b>	<b>Paise/kWh</b>	<b>120.648**</b>

\* to be calculated by the petitioner based on the adjustment formulae

\*\* to be revised as per the figures at Sl. No. 6

78. Energy Charges for 2 months on the basis of as billed GCV for the purpose of Interest in working capital has been worked out as under:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
28137.50	28214.59	28137.50	28815.51	28815.51



## Water Charges

79. Regulation 29(2) of the 2014 Tariff Regulations provide as under:

*“29.(2) The Water Charges and capital spares for thermal generating station shall be allowed separately:*

*Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details regarding the same shall be furnished along with the petition:*

*Provided that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization”*

80. In terms of the above regulation, water charges are to be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check of the details furnished by the petitioner.

81. The water charges claimed by the petitioner for the period 2014-19 are as under:

<i>(₹ in lakh)</i>				
<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
4000.68	4254.72	4524.90	4812.23	5117.81

82. In order to examine the trend of water consumption and rate of water charges, the petitioner was directed vide ROP of the hearing dated 24.5.2016 to furnish the details of the actual water consumption along with the rate of water charges. The details in respect of water charges such as type of cooling water system, water consumption, rate of water charges have been furnished by the petitioner as under:

<b>Description</b>	<b>Remarks</b>
Type of Plant	Coal
Type of cooling water system	Closed circuit cooling system with induced draft cooling tower
Consumption of water	54.79 cusec
Rate of water charges	₹.5.6 /M3, however water charges are paid as per allocated quantities
Total water charges in 2013-14	₹4000.68 lakh

83. The respondents, TANGEDCO and KSEB have raised the issue of unavailability of year wise split up details and proof of previous remittances of water charges by the





petitioner. The petitioner in compliance to the above said directions, has submitted the actual water consumption, rate of water charges for the last 5 Years i.e 2009-14 along with relevant document in support of the claim as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Allocated Water Quantity for station Stage-I & II (Cusec)	75	80	85	120	120
Actual Water drawl Station Stage I& II (Cusec)	79.63	70.65	75.47	80.32	82.19
Rate or Water Charges.	From 1.4.2009 to 28.2.2010, payment on water drawl is made on Actual water consumption for drinking water & Industrial water. i) Industrial Water (@ ₹ 250/- per One lakh gallon) ii) Drinking Water (@ ₹30/- per Ten Thousand cubic feet) From 1.3.2010 to 30.9.2010, payment on water drawl is @ ₹ 250/- per one lakh gallon) on allocated quantity. From 1.10.2010 onwards payment on water drawl is @ ₹ 5.60/m <sup>3</sup> on allocated quantity.				
Actual Water Charges paid for generating station (₹ crore) based on allocation of water	4.05	22.14	42.62	60.01	60.01
Actual Water Charges paid corresponding to Stage-II (Total water charges paid *2/3) (₹ crore) (Proportionate allocation of water charges based on MW capacity)	2.70	14.76	28.42	40.01	40.01

84. The petitioner has further submitted that the payment of water charges is as per quantity of water drawn or allocated whichever is higher. It has submitted that where drawl of water is more than the allocated quantity, the penal rate is six times the rate on the quantity of excess drawl in addition to the water charges on the allocated quantity. The petitioner has also enclosed the copy of water supply agreement signed with Department of Water Resources, Govt. of Odisha dated 27.4.2013 and applicable for period April, 2013 to April, 2016. In justification of the quantity of water required for the generating station, the petitioner has submitted as under:

*“As per the above, the water requirement for 3000 MW (for TSTPS Stage-I & II) @5cubic meter/hr/MW comes out to be 147 cusec (i.e. 131.4 MCM/year). Even being on conservative side with water flow @4cubic meter/hr, the water requirement for both generating stations of TSTPS (2x500MW+4x500 MW) comes out to be 118 cusec (i.e. 105.12 MCM/year).*”





*It is submitted that with better O&M practices, chemical dosing, Ash Water Recirculation System (A WRS) in place, the instant station has been able to reduce the raw water make-up and is maintaining its water requirement within the prescribed quantum as mentioned above.*

*It is further submitted that the agreement of water for a thermal generating station is carried out based on Water Balance Diagram based on various considerations like temperature and relative humidity affecting rate of evaporation of water from raw water pond, Cooling Towers etc, blowdown for design Cycle of Concentration (COC) for circulating water, drift loss of cooling tower, steam loss in the cycle, level of generation etc.*

*It is submitted that due to prohibitive high penal rate for consumption of water beyond allocation and for reasons as detailed above, the water allocation taken is higher than normal consumption. Therefore, Hon'ble Commission may be pleased to consider the above brought out factors behind the difference between allocated quantity and actual consumption of water and allow the expenditure pertaining to the allocated quantity of water for successful and efficient running of the station in long run."*

85. We have examined the submissions. It is noticed that the water charges claimed by the petitioner during 2014-15 is the same as the water charges paid in the year 2013-14. In other words, the total water charges claimed by the petitioner in 2014-15 is based on the water consumption and water charges paid in 2013-14 and the same has been escalated @ 6.35% as per the escalation rate in O&M norms specified by the Commission for the period 2014-19. However, the escalation rate of 6.35% considered by the petitioner is not in conformity with the Water supply agreement signed by the petitioner on 27.4.2013 with the Department of Water resources, Govt. of Odisha, which specify the rate of ₹ 5.60 /m<sup>3</sup> on allocation of water up to 31.3.2016. Hence, the yearly escalation of water charges rate @6.35% is considered after 31.3.2016 as per the escalation rate specified by the Commission in the O&M norms under the 2014 Tariff Regulations. The water charge rate is considered @₹ 5.60/m<sup>3</sup> up to 31.3.2016. Accordingly, water charges have been allowed with the annual escalation of 6.35% to the water charges claimed during 2016-19. Based on this, the projected water charges for the period 2014-19 is allowed as under:

	<b>Projected Water charges (₹ in lakh)</b>
2014-15	4000.68



2015-16	4000.68
2016-17	4254.72
2017-18	4524.90
2018-19	4812.23

86. The water charges allowed as above is subject to truing -up at the end of the tariff period 2014-19 and the petitioner is directed to place on record all relevant information.

87. Based on the above discussions, the total O&M expenses including water charges, as claimed by the petitioner and allowed are summarized as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses claimed	32000.00	34020.00	36160.00	38440.00	40860.00
<b>O&amp;M Expenses allowed</b>	<b>32000.00</b>	<b>34020.00</b>	<b>36160.00</b>	<b>38440.00</b>	<b>40860.00</b>
Water Charges claimed	4000.68	4254.72	4524.90	4812.23	5117.81
<b>Water Charges allowed</b>	<b>4000.68</b>	<b>4000.68</b>	<b>4254.72</b>	<b>4524.90</b>	<b>4812.23</b>
Total O&M Expenses claimed	36000.68	38274.72	40684.90	43252.23	45977.81
<b>Total O&amp;M Expenses allowed</b>	<b>36000.68</b>	<b>38020.68</b>	<b>40414.72</b>	<b>42964.90</b>	<b>45672.23</b>

### Capital Spares

88. The petitioner has not claimed capital spares on projection basis during the period 2014-19. Accordingly, the same has not been considered in this order. However, the claim of the petitioner, if any, shall be considered on merits at the time of truing-up after prudence check.

### Maintenance spares

89. The petitioner has claimed maintenance spares in the working capital as under:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
7200.14	7654.94	8136.98	8650.45	9195.56

90. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provide for maintenance spares @ 20% of the Operation & Maintenance expenses as specified in Regulation 29. In terms of Regulation 29(2) of the 2014 Tariff Regulations and in line with



Commission's order dated 6.10.2015 in Petition No. 186/GT/2014, the maintenance spares @ 20% of O & M expenses allowed is as under:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
7200.14	7604.14	8082.94	8592.98	9134.45

### Receivables

91. Receivables equivalent to two months of capacity charge and energy charges has been worked out and allowed as under:

(₹ in lakh)					
	2014-15	2015-16	2016-17	2017-18	2018-19
Variable charges- for two months	28141.87	28218.97	28141.87	28819.99	28819.99
Fixed charges- for two months	17914.28	18125.79	18583.76	15901.16	16720.56
<b>Total</b>	<b>46056.16</b>	<b>46344.76</b>	<b>46725.63</b>	<b>44721.15</b>	<b>45540.56</b>

### O&M expenses

92. O&M expenses for 1 month claimed by the petitioner for the purpose of working capital in Form-13 B including water charges are as follows:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
3000.06	3189.56	3390.41	3604.35	3831.48

93. Based on the O&M expense norms and in terms of order dated 6.10.2015 in Petition No. 186/GT/2014, the O&M expenses for 1 month is allowed as under:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
3000.06	3168.39	3367.89	3580.40	3806.02

### Month to Month Energy Charges

94. Clause 6 (a) of Regulation 30 of the 2014 Tariff Regulations provides for computation and payment of Capacity Charge and Energy Charge for thermal generating stations:

*"6. Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal place in accordance with the following formula:*



(a) For coal based and lignite fired stations

$ECR = \{(GHR - SFC \times CVSF) \times LPPF / CVPF + SFC \times LPSFi + LC \times LPL\} \times 100 / (100 - AUX)$

Where,

*AUX = Normative auxiliary energy consumption in percentage.*

*CVPF = Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic metre, as applicable.*

*CVSF = Calorific value of secondary fuel, in kCal per ml.*

*ECR = Energy charge rate, in Rupees per kWh sent out.*

*GHR = Gross station heat rate, in kCal per kWh.*

*LC = Normative limestone consumption in kg per kWh.*

*LPL = Weighted average landed price of limestone in Rupees per kg.*

*LPPF = Weighted average landed price of primary fuel, in Rupees per kg”*

95. The petitioner shall compute and claim the Energy Charges on month to month basis from the beneficiaries based on the formulae given under Regulation 30(6)(a) of the 2014 Tariff Regulations read with Commission's order dated 25.1.2016 in Petition No. 283/GT/2014.

96. The petitioner has been directed in order dated 19.2.2016 in Petition No. 33/MP/2014 to introduce helpdesk to attend to the queries of the beneficiaries with regard to the Energy Charges. Accordingly, contentious issues if any, which arise regarding the Energy Charges, should be sorted out with the beneficiaries at the Senior Management level.

### **Rate of interest on working capital**

97. Regulation 28 (3) of the 2014 Tariff Regulations provides as under:

*“Interest on working Capital: (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later.”*

98. In terms of the above regulations, SBI PLR of 13.50% (Bank rate 10.00 + 350bps) has been considered for the purpose of calculating interest on working capital. Accordingly, Interest on Working Capital has been computed as under:



	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of coal stock- 15 days	6795.35	6795.35	6795.35	6959.10	6959.10
Cost of coal towards generation- 30 days	13590.70	13590.70	13590.70	13918.19	13918.19
Cost of secondary fuel oil- 2 months	578.50	580.09	578.50	592.44	592.44
Maintenance spares- 20% of O & M	7200.14	7604.14	8082.94	8592.98	9134.45
Receivables	46056.16	46344.76	46725.63	44721.15	45540.56
O&M expenses- 1 month	3000.06	3168.39	3367.89	3580.41	3806.02
<b>Total working Capital</b>	<b>77220.91</b>	<b>78083.43</b>	<b>79141.03</b>	<b>78364.27</b>	<b>79950.75</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Interest on working capital</b>	<b>10424.82</b>	<b>10541.26</b>	<b>10684.04</b>	<b>10579.18</b>	<b>10793.35</b>

## Compensation Allowance

99. Regulation 17(1) of the 2014 Tariff Regulations provides as under:

*“17. Compensation Allowance: (1) In case of coal-based or lignite-fired thermal generating station or a unit thereof, a separate compensation allowance shall be admissible to meet expenses on new assets of capital nature which are not admissible under Regulation 14 of these regulations, and in such an event, revision of the capital cost shall not be allowed on account of compensation allowance but the compensation allowance shall be allowed to be recovered separately.”*

100. The Compensation Allowance shall be allowed in the following manner from the year following the year of completion of 10, 15, or 20 years of useful life:

Years of operation	Compensation Allowance (₹. lakh/MW/year)
0-10	Nil
11-15	0.20
16-20	0.50
21-25	1.00

101. The petitioner has claimed Compensation Allowance (unit-wise) to meet expenses on new assets of capital nature including in the nature of minor assets as follows:

(₹ in lakh)					
2014-15	2015-16	2016-17	2017-18	2018-19	Total
200	300	400	400	400	1700

102. Two units of the generating station (as on 31.3.2014) and two units (as on 31.3.2015) have completed more than 10 years of commercial operation from their



respective date of COD(s). Accordingly, the Compensation allowance admissible to the petitioner is as under:

Sl.No.		Unit I	Unit II	Unit III	Unit IV
1.	Capacity in MW	500	500	500	500
2.	COD	1-8-2003	1-3-2004	1-11-2004	1-8-2005
	Useful life as on 1.4.2014	10.666	10.085	9.414	8.666
3.	Actual useful life				
	a) 10 years	1.08.2013	1.03.2014	1.11.2014	1.08.2015
	b) 15 years	1.08.2018	1.03.2019	1.11.2019	1.08.2020
	c) 20 years	1.08.2023	1.03.2024	1.11.2024	1.08.2025
	d) 25 years	1.08.2028	1.03.2029	1.11.2029	1.08.2029
	2014-15	100.00	100.00	0.00	0.00
	2015-16	100.00	100.00	100.00	0.00
	2016-17	100.00	100.00	100.00	100.00
	2017-18	100.00	100.00	100.00	100.00
	2018-19	100.00	100.00	100.00	100.00
	<b>Total</b>	<b>500.00</b>	<b>500.00</b>	<b>400.00</b>	<b>300.00</b>

### Annual Fixed Charges

103. Accordingly, the annual fixed charges approved for the generating station for the period 2014-19 is summarized as below:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	27505.82	27807.10	28210.65	9278.10	10319.56
Interest on loan	2316.91	653.07	0.00	0.00	181.02
Return on equity	31237.46	31732.61	32193.12	32584.80	33357.22
Interest on working capital	10424.82	10541.26	10684.04	10579.18	10793.35
O&M expenses	36000.68	38020.68	40414.72	42964.90	45672.23
Compensation allowance	200.00	300.00	400.00	400.00	400.00
Special allowance	0.00	0.00	0.00	0.00	0.00
<b>Total annual fixed charges</b>	<b>107685.69</b>	<b>109054.73</b>	<b>111902.53</b>	<b>95806.98</b>	<b>100723.39</b>

### Application Fee and Publication Expenses

104. The petitioner has sought the reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the period 2014-19. The petitioner has deposited the filing fees of ₹ 88,00,000/- each year for the years 2014-15, 2015-16 and 2016-17 in terms of the provisions of the Central Electricity



Regulatory Commission (Payment of Fees) Regulations, 2012. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations, we direct that the petitioner shall be entitled to recover *pro rata*, the filing fee and the expenses incurred on publication of notices directly from the respondents on production of documentary proof. The filing fees for the remaining years of the tariff period 2017-19 shall be recovered pro rata after deposit of the same and production of documentary proof.

105. Petition No. 293/GT/2014 is disposed of in terms of the above.

**Sd/-**  
**(Dr. M.K.Iyer)**  
**Member**

**Sd/-**  
**(A. S. Bakshi)**  
**Member**

**Sd/-**  
**(A. K. Singhal)**  
**Member**

**Sd/-**  
**(Gireesh B. Pradhan)**  
**Chairperson**



## **Annexure-X**



78%

Years	2023-24												
	Stations	Plant capacity	Telangana's share	Telangana's share	Net availability	Energy dispatched	Variable cost (FY 2023-24)	Variable cost	Fixed cost	Fixed cost	Other cost	Total cost	Total cost
		MW	%	MW	MU	MU	INR/kWh	INR Cr	INR/kWh	INR Cr	INR Cr	INR Cr	INR/kWh
<b>TSGENCO</b>													
KTPS A	0	100%	0	0	0		0	-		0	0	-	
KTPS B	0	100%	0	0	0		0	-		0	0	-	
KTPS C	0	100%	0	0	0		0	-		0	0	-	
KTPS D	500	100%	500	3197.39	3197.39	2.67	853.06	1.19	381.03	0	1234.09	3.86	
KTPS Stage VI	500	100%	500	3250.14	3250.14	2.73	888.26	1.59	517.46	0	1405.72	4.33	
RTS B	62.5	100%	62.5	370.60	370.60	2.99	110.74	3.17	117.34	0	228.08	6.15	
Kakatiya Thermal Power Plant Stage I	500	100%	500	3250.08	2796.89	3.04	848.86	1.49	416.03	0	1264.89	4.52	
Kakatiya Thermal Power Plant Stage II	600	100%	600	3921.22	3921.22	2.93	1146.96	1.81	710.48	0	1857.44	4.74	
BTPS - unit 1	270	100%	270	1844.57	1844.57	2.36	435.87	2.57	473.55	0	909.42	4.93	
BTPS - unit 2	270	100%	270	1844.57	1844.57	2.36	435.89	2.57	473.55	0	909.44	4.93	
BTPS - unit 3	270	100%	270	1844.57	1844.57	2.36	435.91	2.57	473.55	0	909.46	4.93	
BTPS - unit 4	270	100%	270	1844.57	1844.57	2.36	435.93	2.57	473.55	0	909.48	4.93	
Yadradri - TPS - I	800	100%	800	1841.18	1841.18	2.87	528.44	2.18	400.80	0	929.24	5.05	
Yadradri - TPS - II	800	100%	800	905.50	905.50	2.87	259.90	2.21	200.40	0	460.30	5.08	
Yadradri - TPS - III		100%	0	0	0	2.87	0	-	0	0	0	-	
Yadradri - TPS - IV		100%	0	0	0	2.87	0	-	0	0	0	-	
Yadradri - TPS - V		100%	0	0	0	2.87	0	-	0	0	0	-	
KTPS VII		100%	0	5659.5312	5659.5312	2.41	1363.381066	1.83	1037.97	0	2401.351066	4.24	
<b>Total Thermal</b>	<b>4842.5</b>		<b>4842.5</b>	<b>29773.93085</b>	<b>29320.74033</b>	<b>2.64</b>	<b>7743.190502</b>	<b>1.94</b>	<b>5675.7</b>	<b>0</b>	<b>13418.8905</b>		
MACHKUND PH TS Share	0	0%	0	0	0	-	0	-	-		0	0.00	
TUNGBHADRA PH TS Share	0	0%	0	0	0	-	0	-	-		0	0.00	
NSPH	815.6	100%	815.6	2213.670893	2213.670893	-	0	1.45	319.9059662		319.9059662	1.45	
NSLCPH	60	100%	60	162.8497469	162.8497469	-	0	1.45	23.53403381		23.53403381	1.45	
POCHAMPAD PH	27	100%	27	68.83380257	68.83380257	-	0	3.70	25.465		25.465	3.70	
NIZAMSAGAR PH	10	100%	10	17.241	17.241	-	0	5.47	9.431481481		9.431481481	5.47	
SINGUR	15	100%	15	38.24100143	38.24100143	-	0	3.70	14.14722222		14.14722222	3.70	
SSLM LCPH	900	100%	900	2056.312825	2056.312825	-	0	2.23	459.51		459.51	2.23	
Priyadarshini Jurala Hydro Electric Project- TS Share	234	50%	117	169.71783	169.71783	-	0	3.62	61.475		61.475	3.62	
Lower Jurala Hydro Electric Project	240	100%	240	358.3550798	358.3550798	-	0	7.24	259.51		259.51	7.24	
POCHAMPAD Stage-II	9	100%	0	16.556	16.556	-	0	5.61	9.29		9.29	5.61	
PULICHINTAL(New Project)	120	100%	120	309.279312	309.279312	-	0	4.01	123.87		123.87	4.01	
Mini Hydel (Peddapalli HES)	9.16	100%	9.16	2.745490909	2.745490909	-	0	34.53	9.48		9.48	34.53	
Palair HES	2.00	100%	2	0.610109091	0.610109091	-	0	30.92	1.886296296		1.886296296	30.92	
Pochampad Stage-IV	0	0%	0	0	0	-	0	-	0		0	0	
<b>Total Hydro</b>	<b>2441.76</b>		<b>2315.76</b>	<b>5414.413091</b>	<b>5414.413091</b>	<b>-</b>	<b>0</b>	<b>2.43</b>	<b>1,318</b>	<b>0</b>	<b>1317.505</b>		
<b>TOTAL TSGENCO</b>	<b>7284.26</b>	<b>0%</b>	<b>7158.26</b>	<b>35188.34394</b>	<b>34735.15343</b>	<b>2.23</b>	<b>7743.190502</b>	<b>2.01</b>	<b>6993.205</b>	<b>0</b>	<b>14736.3955</b>		

0												
<b>Central Generating Stations</b>												
NTPC (SR) - I & II	2100	17%	353.01	2682.159894	2682.159894	2.80	751	0.73	195.26	0	946.26	3.53
NTPC (SR) Stage III	500	18%	88.5	648.89616	648.89616	2.76	179	0.83	54	0	233	3.59
<b>Total NTPC(SR)</b>	<b>2600</b>		<b>441.51</b>	<b>3331.056054</b>	<b>3331.056054</b>		<b>930</b>		<b>249.26</b>	<b>0</b>	<b>1179.26</b>	
Farakka	0	0%	0	0	0	-	0	-	0	0	0	0
Kahalgaon	0	0%	0	0	0	-	0	-	0	0	0	0
Talcher - Stage 1	0	0%	0	0	0	-	0	-	0	0	0	0
Talcher Stage 2	2000	11%	217.4	1597.255681	1597.255681	1.75	279.36	0.71	114.044	0	393.404	2.46
<b>Total NTPC(ER)</b>	<b>2000</b>		<b>217.4</b>	<b>1597.255681</b>	<b>1597.255681</b>		<b>279.36</b>		<b>114.044</b>	<b>0</b>	<b>393.404</b>	
NTPC Simhadri Stage I	1000	54%	538.9	4024.19668	4018.365391	3.02	1212.743117	0.90	361.67	0	1574.413117	3.92
NTPC Simhadri Stage II	1000	26%	256.8	1931.43132	1931.43132	3.00	579.816	1.44	277.779	0	857.595	4.44
<b>Total NTPC- Simhadri</b>	<b>2000</b>		<b>795.7</b>	<b>5955.628</b>	<b>5949.796711</b>		<b>1792.559117</b>		<b>639.449</b>	<b>0</b>	<b>2432.008117</b>	
NTPC Kudigi - I, II & III	2400	12%	281.04	2060.362248	180.2169	3.91	70.51889503	36.04	649.478	0	719.996895	39.95
<b>Total NTPC Kudigi</b>	<b>2400</b>	<b>12%</b>	<b>281.04</b>	<b>2060.362248</b>	<b>180.2169</b>		<b>70.51889503</b>		<b>649.478</b>	<b>0</b>	<b>719.996895</b>	
NLC TS-II Stage-I	630	1%	5.229	35.1505	35.1505	2.74	9.62	0.71	2.5	0	12.12	3.45
NLC TS-II Stage-II	840	1%	6.888	46.3054	46.3054	2.74	12.674	0.74	3.408	0	16.082	3.47
NNTPP	1000	6%	61.9	381.7373	381.7373	2.21	84.249	1.80	68.865	0	153.114	4.01
Neyveli new unit - 1	420	1%	5.46	40.755	40.755	2.45	9.989	0.97	3.933	0	13.922	3.42
Neyveli new unit - 2	500	1%	6.5	30.017	30.017	2.64	7.933	2.31	6.931	0	14.864	4.95
<b>Total NLC</b>	<b>3390</b>		<b>85.977</b>	<b>533.9652</b>	<b>533.9652</b>		<b>124.465</b>		<b>85.637</b>	<b>0</b>	<b>210.102</b>	
NPC-MAPS	440	5%	22.044	56.43513	56.43513	2.54	14.34	-	0	0	14.34	2.54
NPC-Kaiga unit I & II	440	15%	67.716	426.8578095	426.8578095	3.48	148.64	-	0	0	148.64	3.48
NPC-Kaiga unit III & IV	440	16%	72.028	462.5368055	462.5368055	3.48	161.065	-	0	0	161.065	3.48
NPC- Kudankulam	1000	0%	4.3	27.881028	27.881028	4.16	11.594	-	0	0	11.594	4.16
Kudankulam (KKNPP) Unit-II	1000	5%	50	334.8	334.8	4.16	139.22	-	0	0	139.22	4.16
<b>Total NPC</b>	<b>3320</b>		<b>216.088</b>	<b>1308.510773</b>	<b>1308.510773</b>		<b>474.859</b>		<b>0</b>	<b>0</b>	<b>474.859</b>	
Vallur Thermal Power Plant (NTECL - Vallur)	1500	7%	106.2	810.453972	69.8796	3.86	26.98773225	20.59	143.86	0	170.8477323	24.45
NLC Tamilnadu Power Ltd (Tuticorin)	1000	15%	147.5	1435.6175	130.2425	4.38	57.09833813	17.12	223	0	280.0983381	21.51
NCE - Bundled Power (Coal)	85	54%	45.8065	336.36	336.36	6.47	217.5	-	0	0	217.5	6.47
NCE - Bundled power NVVNL (Coal) JNNSM Ph1	0	0%	0	0	0	-	0	-	0	0	0	0.00
NCE - Bundled power NVVNL (Coal) JNNSM Ph2	200	17%	33.86	1394.707854	1394.707854	3.58	499.091632	1.39	194.1607461	0	693.2523781	4.97
NLC-TPS-II 2nd Expansion	0	0%	0	0	0	-	0	-	0	0	0	0
Telangana STPP (phase I)	1600	85%	1360	8247.28548	8247.28548	2.05	1693.974425	2.04	1686.511982	0	3380.486407	4.10
<b>TOTAL CGS</b>	<b>20095</b>		<b>3731.0815</b>	<b>27011.20276</b>	<b>23079.27675</b>	<b>2.67</b>	<b>6166.414139</b>	<b>1.73</b>	<b>3985.400729</b>	<b>0</b>	<b>10151.81487</b>	<b>4.40</b>
0												
<b>APGPCL</b>												
APGPCL I - Allocated capacity	100	7%	6.67	0	0	-	0	-	-	0	0	0.00
APGPCL II - Allocated capacity	172	10%	17.84	0	0	-	0	-	-	0	0	0.00
<b>Total APGPCL</b>	<b>272</b>		<b>24.51</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>	<b>0</b>	<b>#DIV/0!</b>	<b>0</b>	<b>0</b>	<b>0</b>	
0												
<b>IPPs</b>												
Thermal Power Tech Unit I	500	54%	269.45	2127.905073	2127.905073	2.31	492.4413203	1.49	317.5814116	60.47730207	870.500034	4.09
Thermal Power Tech Unit II	570	100%	570	4501.413589	522.6773699	3.86	201.6716014	21.72	1135.019394	0	1336.690995	25.57
<b>TOTAL IPPS</b>	<b>1070</b>		<b>839.45</b>	<b>6629.318662</b>	<b>2650.582443</b>	<b>2.62</b>	<b>694.1129217</b>	<b>5.48</b>	<b>1452.600805</b>	<b>60.47730207</b>	<b>2207.191029</b>	

0													
<b>NCE</b>													
NCE - Bio-Mass	12	100%	12	20.12565	20.12565	7.44	15	-	0		14.96482957	7.44	
NCE - Bagasse	66.7	100%	66.7	46.954208	46.954208	5.12	24	-	0		24.0469427	5.12	
NCE - Municipal Waste to Energy	30.6	100%	30.6	143.37054	143.37054	7.84	112	-	0		112.4025034	7.84	
NCE - Industrial Waste based power project	18.5	100%	18.5	71.34898	71.34898	7.47	53	-	0		53.30764968	7.47	
NCE - Wind Power	128.1	100%	128.1	273.827364	273.827364	4.31	118	-	0		118.0224493	4.31	
NCE - Mini Hydel	2.55	100%	2.55	1.4593	1.4593	2.15	0	-	0		0.3137495	2.15	
NCE - Solar	2843.74	100%	2843.74	5021.8819	5,022	5.89	2,957	-	0		2957.460206	5.89	
NTPC CPSU Ph-II Tr I & II (1692 MW)	1692	100%	1692	2813.347259	2,813	2.82	794	-	0		794.1720035	2.82	
NTPC CPSU Ph-II Tr III (735 MW)	735	100%	735	716.605099	717	2.45	176	-	0		175.5682493	2.45	
SECI 400 MW	400	100%	400	791.985707	792	2.78	220	-	0		220.1720265	2.78	
SECI 1000 MW	1000	100%	1000	1221.275899	1,221	2.44	298	-	0		298.4069637	2.44	
NTPC Bundled Scheme under JNNISM Ph-1	45.81	100%	45.81	37.217117	37	10.69	40	-	0		39.78509807	10.69	
NTPC Bundled Scheme under JNNISM Ph-II (400 MW)	400	100%	400	799.88209	800	4.74	379	-	0		379.0786173	4.74	
<b>TOTAL NCE</b>	<b>7375</b>		<b>7375</b>	<b>11959.28111</b>	<b>11,959</b>	<b>4.34</b>	<b>5,188</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>5187.701288</b>		
0													
<b>OTHERS</b>													
Singareni CCL I	1200	100%	1200	8940.978	3728.481519	3.19	1188.986302	3.73	1389.49	1.554069365	2580.030371	6.92	
Singareni CCL II	800	100%	0	0	0					0			
CSPDCL	1000	100%	1000	6824.7288	6824.7288	1.20	818.967456	2.70	1842.676776	0	2661.644232	3.90	
<b>TOTAL OTHERS</b>	<b>3000</b>		<b>2200</b>	<b>15765.7068</b>	<b>10553.21032</b>	<b>1.90</b>	<b>2007.953758</b>	<b>3.06</b>	<b>3232.166776</b>	<b>1.554069365</b>	<b>5241.674603</b>		
0													
<b>MARKET</b>													
ST Power (FY 20)	0	100%	0	0	0		0	-	0		0	0	
PTC	550	100%	550	0	0	-	0	-	0		0	0	
PGCIL Non POC	0	0%	0	0	0		0	-			0	0	
POSOCO	0	0%	0	0	0		0	-			0	0	
TSTRANSCO-TR TSSPDCL	0	0%	0	0	0		0	-			0	0	
TSTRANSCO-SLDC TSSPDCL	0	0%	0	0	0		0	-			0	0	
Wheeling KPTCL/Reactive KPTCL/AP	0	0%	0	0	0		0	-			0	0	
Wheeling Tantransco/Asset Maintenance	0	0%	0	0	0		0	-			0	0	
Reactive	0	0%	0	0	0		0	-			0	0	
STOA	0	0%	0	0	0		0	-			0	0	
UI	0	0%	0	0	0		0	-			0	0	
Interest on Pension Bonds	0	0%	0	0	0		0	-	1,379		1378.97	0	
Other Short Term Sources	0	0%	0	0	0		0	-			0	0	
D-D Sales/Purchase	0	0%	0	0	0		0	-			0	0	
<b>TOTAL MARKET</b>	<b>550</b>		<b>550</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>1378.97</b>	<b>0</b>	<b>1378.97</b>		
0													
<b>TOTAL (From All Sources)</b>	<b>39646.26</b>	<b>0%</b>	<b>21878.3015</b>	<b>96553.85328</b>	<b>82977.50405</b>	<b>2.63</b>	<b>21799.37261</b>	<b>2.05</b>	<b>17042.34331</b>	<b>62.03137143</b>	<b>38903.74729</b>		



UI	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Pension Bonds	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Short Term Sources	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST Power (FY 20)	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KTPS A	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KTPS B	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KTPS C	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NTPC CPSU Ph-II Tr III (735 MW)	1	2.45	29.58	30.57	29.58	30.57	30.57	29.58	30.57	100.45	103.80	103.80	93.75	103.80
SECI 400 MW	1	2.78	65.09	67.26	65.09	67.26	67.26	65.09	67.26	65.09	67.26	67.26	60.76	67.26
SECI 1000 MW	1	2.44	50.42	52.10	50.42	52.10	52.10	50.42	52.10	171.19	176.89	176.89	159.78	176.89
Singareni CCL II	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PTC	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Farakka	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kahalgaon	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Talcher - Stage 1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NLC-TPS-II 2nd Expansion	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CSPDCL	61	1.20	559.40	578.05	559.40	578.05	578.05	559.40	578.05	559.40	578.05	578.05	540.76	578.05
Talcher Stage 2	62	1.75	139.43	143.34	101.61	123.78	121.77	121.89	143.26	137.89	142.75	143.09	134.70	143.75
Telangana STPP (phase I)	63	2.05	385.99	398.85	385.99	797.71	797.71	771.98	797.71	771.98	797.71	797.71	746.24	797.71
NNTPP	64	2.21	36.46	37.82	36.46	37.20	37.20	35.96	21.29	17.33	21.29	28.29	35.10	37.33
Thermal Power Tech Unit I	65	2.31	184.30	190.45	184.30	190.45	190.45	184.30	190.45	108.00	152.29	190.45	172.02	190.45
BTPS - unit 1	66	2.36	155.56	160.75	155.56	139.43	155.42	155.56	160.75	155.56	160.75	134.09	150.38	160.75
BTPS - unit 2	67	2.36	155.56	160.75	155.56	139.43	155.42	155.56	160.75	155.56	160.75	134.09	150.38	160.75
BTPS - unit 3	68	2.36	155.56	160.75	155.56	139.43	155.42	155.56	160.75	155.56	160.75	134.09	150.38	160.75
BTPS - unit 4	69	2.36	155.56	160.75	155.56	139.43	155.42	155.56	160.75	155.56	160.75	134.09	150.38	160.75
KTPS VII	70	2.41	463.90	479.36	463.90	479.36	479.36	463.90	479.36	463.90	479.36	479.36	448.43	479.36
Neyveli new unit - 1	71	2.45	3.67	3.77	3.67	3.78	3.77	2.51	1.95	3.29	3.59	3.67	3.43	3.67
Neyveli new unit - 2	72	2.64	2.96	1.55	2.31	2.18	3.06	2.96	3.06	1.48	1.94	2.63	2.85	3.04
KTPS D	73	2.67	280.45	289.80	280.45	235.02	135.41	265.51	289.80	280.45	289.80	289.80	271.11	289.80
KTPS Stage VI	74	2.73	281.80	291.20	281.80	291.20	291.20	281.80	291.20	281.80	187.87	206.65	272.41	291.20
NLC TS-II Stage-I	75	2.74	3.14	3.25	3.14	2.31	3.25	2.13	3.16	2.11	3.16	3.20	3.05	3.25
NLC TS-II Stage-II	76	2.74	4.17	4.28	3.22	4.28	3.35	4.17	3.35	4.10	3.21	3.83	4.03	4.31
NTPC (SR) Stage III	77	2.76	58.24	60.19	58.24	60.19	60.19	58.24	60.19	58.24	60.19	12.40	42.41	60.19
NTPC (SR) - I & II	78	2.80	230.38	238.06	230.38	238.06	238.06	230.38	214.80	200.37	193.05	238.06	203.77	226.81
Yadradri - TPS - I	79	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	467.84	467.84	437.66	467.84
Yadradri - TPS - II	80	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	437.66	467.84
Yadradri - TPS - III	81	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yadradri - TPS - IV	82	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yadradri - TPS - V	83	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kakatiya Thermal Power Plant Stage II	84	2.93	366.47	378.69	0.00	195.45	378.69	366.47	378.69	366.47	378.69	378.69	354.26	378.69
RTS B	85	2.99	31.67	32.73	31.67	32.73	32.73	31.67	32.73	15.84	32.73	32.73	30.62	32.73
NTPC Simhadri Stage II	86	3.00	165.55	171.07	121.40	132.44	171.07	165.55	171.07	165.55	171.07	171.07	154.51	171.07
NTPC Simhadri Stage I	87	3.02	347.41	358.99	347.41	353.16	358.99	347.41	358.99	225.82	277.93	358.99	324.25	358.99
Kakatiya Thermal Power Plant Stage I	88	3.04	266.40	275.28	266.40	0.00	131.84	266.40	275.28	231.93	275.28	275.28	257.52	275.28
Singareni CCL I	89	3.19	798.03	108.71	386.43	0.00	0.00	155.96	198.83	0.00	502.39	610.16	143.33	824.64
Thermal Power Tech Unit II	90	3.86	389.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	132.80
Vallur Thermal Power Plant (NTECL - Vallur)	91	3.86	69.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NTPC Kudigi - I, II & III	92	3.91	180.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NLC Tamilnadu Power Ltd (Tuticorin)	93	4.38	130.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL (From All Sources)</b>			<b>7250.6</b>	<b>5917.3</b>	<b>5731.9</b>	<b>5931.7</b>	<b>6991.2</b>	<b>7121.2</b>	<b>7629.5</b>	<b>6297.2</b>	<b>7128.2</b>	<b>7346.9</b>	<b>7197.0</b>	<b>8435.0</b>

**ANNEXURE-XI(i)**

<b>CGS POC, Non-Poc and SRLDC Charges break up</b>			
		2022-23(H2)	2023-2024
	Actual October'2022 MONTH bill(Crs)	6 Months	12 months
POSOCO SRLDC CHARGES	0.279	1.675	3.351
ULDC CHARGES	0.060	0.358	0.717
<b>Total</b>		<b>2.034</b>	<b>4.068</b>

**POC Charges break-up**

SI.No.	Month	Gross Amount
1	Apr-22	1189929406
2	May-22	1024782997
3	Jun-22	1029921584
4	Jul-22	1144818521
5	Aug-22	1027672463
6	Sep-22	1075446078
7	1/2022 to 3/2022 (Bill-2)	679315303

<b>FY.2022-23 H1 actual amount</b>	<b>7171886352</b>	Rs
<b>FY.2022-23 H1 actual amount</b>	<b>717.189</b>	Crs
<b>FY.2022-23 H2 Projections</b>	<b>717.189</b>	Crs
<b>FY.2023-24 Projections</b>	<b>1434.377</b>	Crs

## **Annexure-XI (ii)**

भारत सरकार  
केंद्रीय विद्युत प्राधिकरण  
दक्षिण क्षेत्रीय विद्युत समिति  
29, रेसकोर्स क्रॉस रोड  
बेंगलूरु -560009



Government of India  
Central Electricity Authority  
Southern Regional Power Committee  
29, Race Course Cross Road  
Bengaluru-560 009

Email: <a href="mailto:secomm1srpc-ka@nic.in">secomm1srpc-ka@nic.in</a>	Web site: <a href="http://www.srpc.kar.nic.in">www.srpc.kar.nic.in</a>	Fax: 080-22259343
सं/No. SRPC/SE(C)/RTA&RTDA/2022/	दिनांक /Date	30 <sup>th</sup> August 2022

सेवामें / To

वितरण सूची के अनुसार  
As per Distribution List

**विषय: जुलाई 2022 महीने का क्षेत्रीय पारेषण लेखा**

**Subject: Regional Transmission Account & Regional Transmission Deviation Account for the billing month of September 2022 (Billing Period: July 2022)-reg.**

महोदय /Sir,

CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 came into effect from 01.11.2020. As per the Regulation (14)(5)(b), Transmission charges payable by DICs shall be notified by the Implementing Agency by 25<sup>th</sup> day of the month following billing period. Accordingly, Implementing Agency (IA) vide letter dated 25.08.2022 has notified the Transmission Charges payable by DICs for the billing month of September 2022(**Annexure-I**).

Regional Transmission Account (RTA) and Regional Transmission Deviation Account (RTDA) for the billing period of February 2022 (billing month: April 2022) in respect of Southern Region has been prepared based on the data furnished by IA and as per CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 and the methodology for computation of Transmission Deviation for the cases (i) CGS/ISGS is connected to both ISTS & STU system and LTA for the state is exempted/not granted and (ii) CGS/ISGS is connected to only STU network and LTA to the state is exempted as agreed in the 51<sup>st</sup> Meeting of Commercial Sub-Committee held on 22.04.2022. The methodology of computation of Transmission Deviation is at **Annexure-II**. Transmission charges of the state are bifurcated on pro rata basis on the basis of LTA/MTOA of the DICs included in the state's control area. RTA/ RTDA are made available on SRPC website [www.srpc.kar.nic.in](http://www.srpc.kar.nic.in).

Discrepancy, if any, may please be reported within 15 days from the date of issue of the accounts.

Yours faithfully,

संलग्नक: यथोपरि/ Encl: as above

(मेका रामकृष्ण/ MEKA RAMAKRISHNA  
अधीक्षण अभियन्ता(वा)/Superintending Engineer (C)



भारत सरकार

**GOVERNMENT OF INDIA**

उर्जा मंत्रालय

**MINISTRY OF POWER**

केन्द्रीय विद्युत प्राधिकरण

**CENTRAL ELECTRICITY AUTHORITY**

दक्षिण क्षेत्रीय विद्युत समिति

**SOUTHERN REGIONAL POWER COMMITTEE**

क्षेत्रीय पारेषण लेखा

**REGIONAL TRANSMISSION ACCOUNT**

**&**

**REGIONAL TRANSMISSION DEVIATION ACCOUNT**

**Billing Period: July 2022**

**Billing Month: September, 2022**

# 1. Transmission Charges for Designated ISTS Customers (DICs) for the billing Period July, 2022

## Billing Month: September, 2022

DIC	LTA / MToA (MW)	Usage based AC system charges (Rs.)	Balance AC system charges (Rs.)	National Component (Rs.) (NC-RE)	National Component (Rs.) (NC-HVDC)	Regional Component (Rs.)	Transformer Component (Rs.)	Total Transmission Charges (Rs.)
Andhra Pradesh	1725.768	23,31,05,105	31,46,66,348	3,31,31,296	3,87,98,685	2,91,37,206	3,55,08,519	68,43,47,158
Karnataka (BESCOM)	1,969.580	16,78,65,357	35,91,21,600	3,78,12,000	4,42,80,063	3,32,53,636	4,95,05,901	69,18,38,557
Karnataka (HESCOM)	833.568	7,10,44,154	15,19,87,823	1,60,02,835	1,87,40,255	1,40,73,639	2,09,51,940	29,28,00,646
Karnataka (GESCOM)	487.207	4,15,24,193	8,88,34,498	93,53,406	1,09,53,385	82,25,821	1,22,46,080	17,11,37,383
Karnataka (MESCOM)	257.136	2,19,15,414	4,68,84,590	49,36,490	57,80,918	43,41,379	64,63,170	9,03,21,961
Karnataka (CESCOM)	440.192	3,75,17,157	8,02,62,073	84,50,813	98,96,396	74,32,039	1,10,64,348	15,46,22,826
Kerala	2738.127	15,93,36,961	49,92,53,927	5,25,66,567	6,15,58,523	4,62,29,489	5,19,18,241	87,08,63,708
Tamil Nadu	8,384.564	38,16,38,330	1,52,87,92,058	16,09,66,885	18,85,01,635	14,15,61,783	9,45,15,191	2,49,59,75,882
Telangana	3894.692	20,34,09,536	71,01,35,141	7,47,70,301	8,75,60,394	6,57,56,488	3,55,65,151	1,17,71,97,010
Puducherry	533.085	1,33,79,884	9,71,99,607	1,02,34,170	1,19,84,812	90,00,406	1,28,54,861	15,46,53,739
PGCIL(SR)	3.976	4,62,286	7,24,960	76,331	89,388	67,129	88,648	15,08,743
PUGALUR HVDC(SR)	2.918	1,32,818	5,32,050	56,020	65,602	49,266	32,893	8,68,650
THRISSUR HVDC(SR)	1.109	64,535	2,02,208	21,291	24,932	18,724	21,028	3,52,718
Goa(SR)	93.078	57,102	1,69,71,304	17,86,913	20,92,579	15,71,494	0	2,24,79,392
Sembcorp Energy India Ltd Project-II (SGPL)	490.000	0	8,93,43,718	94,07,022	1,10,16,172	82,72,973	0	11,80,39,885
Sembcorp Energy India Ltd Project-I (TPCIL/SEIL)	55.000	47,83,283	1,00,28,376	10,55,890	12,36,509	9,28,599	0	1,80,32,658
South Western Railways	10.000	8,52,290	18,23,341	1,91,980	2,24,820	1,68,836	2,51,353	35,12,620
SAIL, Salem	13.650	6,21,304	24,88,861	2,62,053	3,06,879	2,30,461	1,53,870	40,63,428
<b>Total(SR)</b>								<b>6,95,26,16,964</b>

## 2. Details of Entity-wise Bilateral Billing

DIC	Name of the Assets	Bilateral Charges (Rs.)	Remarks
Karnataka DISCOMS	220 kV line bays at Madhugiri for termination of 220 kV D/C Madhugiri-Nittur line	<b>8,40,822</b>	As per Regulation 13(12) of Sharing Regulations 2020
Karnataka Power Transmission Corporation Limited (KPTCL)	04 No. 220 KV bays at 400/220kV Yelahanka Substation	<b>27,10,419</b>	As per Regulation 13(12) of Sharing Regulations 2020
Sembcorp Energy India Ltd Project-I (TPCIL/SEIL)	Thermal Powertech Corporation India Ltd Switchyard-Nellore PS 400kV D/c (quad)	<b>1,13,512</b>	As per Regulation 13(9) of Sharing Regulations 2020

DIC	Name of the Assets	Bilateral Charges (Rs.)	Remarks
BHAVINI	Asset 1. Kalpakkam PFBR-Sirucheri 230 kV D/C Line, Asset 2. Kalpakkam PFBR -Arani 230KV D/C Line, Asset3. 230 kV D/C Kalpakkam PFBR-Kanchipuram transmission line and 2 numbers of 230kV Bays at Kanchipuram Sub-station of TNEB	<b>2,04,69,173</b>	As per Regulation 13(3) of Sharing Regulations 2020
Betam	2X500MVA 400/230kV transformers along with associated bays and equipment at new 400/230kV (GIS) Tirunelveli Pooling Sub-station	<b>4,83,770</b>	As per Regulation 13(3) of Sharing Regulations 2020
Sembcorp Energy India Ltd Project-II	YTC of NCC Power projects Ltd. - Nellore PS 400kV D/c (quad)	<b>70,07,360</b>	As per Regulation 13(9) of Sharing Regulations 2020
AP Solar Power Corporation Pvt Ltd (APSPCL)	2 nos. 220 kV Line bays (Bay No 209 & 211) at NP Kunta substation	<b>12,76,471</b>	As per Regulation 13(3) of Sharing Regulations 2020
<b>Total Bilateral Charges</b>		<b>3,29,01,527</b>	

## 2.a. Transmission Charges to be paid by DICs under Regulation 13(7)

Where Long Term Access is granted to a generating station on existing margins and COD of the generating station or unit(s) thereof is delayed

Name of Genertaing Station	State	Capcity (MW)	LTA granted (MW)	Commissioned Capacity (MW)	Date of LTA Operation	Delayed Capacity (MW)	Transmission Charges (Rs.)
ReNew Power Pvt Limited	Karnataka	-	300	174.3	63 MW: 24.09.21, 10.5 MW: 11.10.21, 12.6 MW: 19.10.21, 14.7 MW: 26.10.21, 16.8 MW: 11.11.21, 10.5 MW: 23.11.21, 10.5 MW: 30.11.21, 35.7MW: 27.07.22		61,867

### 3 . Details of Regional Transmission Deviation Charges

Entity	Transmission Deviation Charges Payable (Rs)
Andhra Pradesh	3,35,01,020
Karnataka	0
Kerala	0
Tamil Nadu	80,981
Telangana	2,81,10,414
Puducherry	0
PGCIL(SR)	0
PUGALUR HVDC(SR)	5
THRISSUR HVDC(SR)	0
Goa(SR)	1,05,401
NTPC,RSTPS 1& 2	0
NTPC, RSTPS 3	14,99,643
NTPC, TALCHER 2	16,42,328
NTPC, SIMHADRI 2	44,124
NTPC, SIMHADRI 1	14,182
NTPC, KUDGI STAGE 1	55,140
NTECL, VALLUR	0
NLC TS II Stage 1	0
NLC TS II Stage 2	15,815
NLC Stage 1 EXPN	2,91,645
NLC Stage 2 EXPN	8,42,429
NTPL	404
NNTPP	19,87,825
NPCIL,KGS 1 & 2	4,58,525
NPCIL, KGS 3 & 4	1,43,41,478
NPCIL, MAPS	0
NPCIL, KKNPP UNIT 1	27,42,146
NPCIL, KKNPP UNIT 2	89,97,923
<b>Seller</b>	
LKPPL STAGE 2	2,82,368
LKPPL STAGE 3	0
MEPL	2,34,724
SEL	3,39,456
SEIL/ TPCIL	0
COASTAL ENERGEN	12,19,819
IL&FS	12,47,108
SEIL Project 2/SGPL	7,77,398

### 3 (a). Details of Deviation DIC Wise in MW

DIC	Rate Rs/MW	Excess Injection (MW)	Excess Withdrawal (MW)	Charges For Excess Injection/Withdrawal (Rs)
<b>Beneficiaries</b>				
Andhra Pradesh	144.57	0	231728.71	33501020
Karnataka	128.06	0	0	0
Kerala	115.96	0	0	0
Tamil Nadu	108.53	0	746.16	80981
Telangana	110.2	0	255085.43	28110414
Puducherry	105.77	0	0	0
PGCIL(SR)	-	0	0	0
PUGAUR HVDC(SR)	108.53	0	0.05	5
THRISSUR HVDC(SR)	115.96	0	0	0
Goa(SR)	88.05	0	1197.06	105401
<b>Inter State Generating Stations</b>				
RSTPS 1& 2	110.2	0	0	0
RSTPS 3	110.2	0	13608.38	1499643
TALCHER 2	144.57	11360.09	0	1642328
SIMHADRI 2	144.57	305.21	0	44124
SIMHADRI 1	144.57	98.1	0	14182
KUDGI STAGE 1	128.06	430.58	0	55140
NTECL	108.53	0	0	0
NLC TS II STAGE 1	108.53	0	0	0
NLC TS II STAGE 2	108.53	145.72	0	15815
NLC 1 EXPN	108.53	2687.23	0	291645
NLC 2 EXPN	108.53	0	7762.18	842429
NTPL	108.53	3.72	0	404
NNTPP	108.53	18315.9	0	1987825
MAPS	108.53	0	0	0
KGS 1&2	128.06	3580.55	0	458525
KGS 3&4	128.06	111990.3	0	14341478
KKNPP UNIT 1	108.53	0	25266.25	2742146
KKNPP UNIT 2	108.53	82907.24	0	8997923
<b>SELLER</b>				
COASTAL ENERGEN	108.53	11.53	11227.93	1219819
MEPL	144.57	0	1623.6	234724
SEPL	144.57	0	2348.04	339456
SEIL/ TPCIL	144.57	0	0	0
LKPPL2	144.57	0	1953.16	282368

DIC	Rate Rs/MW	Excess Injection (MW)	Excess Withdrawal (MW)	Charges For Excess Injection/Withdrawal (Rs)
LKPPL3	144.57	0	0	0
IL&FS	108.53	0	11490.91	1247108
SEIL Project 2 /SGPL	144.57	0	5377.31	777398
<b>Generating Station Under INFIRM Stage</b>				
				<b>Charges For Injection/Withdrawal (Rs)</b>
Nil				

**पावर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड**  
(भारत सरकार का उपक्रम)  
**POWER SYSTEM OPERATION CORPORATION LIMITED**  
(A Government of India Enterprise)  
**राष्ट्रीय भार प्रेषण केन्द्र National Load Despatch Centre**



**Notification of Transmission charges payable by DICs for Billing Month of September, 2022**

**No: TC/08/2022**

**Date: 25.08.2022**

1. Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses), Regulations 2020 came into force with effect from 1.11.2020. National Load Despatch centre (NLDC) as the Implementing Agency under Sharing Regulations 2020 has been entrusted with the responsibility of computation of ISTS transmission charges and losses. As per Regulation (14)(5)(b), Transmission charges payable by DICs shall be notified by the Implementing Agency by 25th day of the month following billing period. The computation of transmission charges shall be done on the basis of inputs received from ISTS licensees, DICs/ States, CTU as per the Regulations.
2. As per Regulation 24(1), all entities whose transmission elements have declared COD during the billing period shall submit to the Implementing Agency, network data, date(s) of commercial operation of the new transmission element and Yearly Transmission Charge (YTC) of such transmission element in the format stipulated by the Implementing Agency, on or before the end of the billing period.
3. As per Regulation 24(2), Implementing Agency shall publish the peak block of the billing period on the first day of the month following the billing period. Accordingly, NLDC had identified **79<sup>th</sup> time block (19:30 Hrs to 19:45 Hrs) on 07<sup>th</sup> July,2022** as a peak block for the billing period of July'22 and published the information of peak block on POSOCO website. Details of the inputs from entities have been received as per the stipulated timelines is enclosed as **Annexure-I**.
4. NLDC/RLDCs have examined the data and information submitted by ISTS licensees/ Deemed ISTS licensees, DICs/ States and CTU. Based on the inputs furnished by ISTS licensees, Monthly Transmission Charges (MTC) to be considered in the computations have been shared with all ISTS licensees/ deemed ISTS licensees for review and comments on 16.08.2022 with last date of submission of comments as 18.08.2022.
5. Based on inputs furnished by DICs/ States, all India basic network has been prepared along with node wise generation and demand as per the peak block and made it available on POSOCO website on 15.08.2022 for review and comments of DICs/ States in line with the notified procedures with the last date for submission of comments as 18.08.2022.
6. The methodology involved in the computation exercise along with the assumptions followed in the computations are enclosed at **Annexure-II**.
7. Accordingly, the transmission charges are hereby notified for the billing month of September'22 mentioned as follows:
  - a) Various components of the transmission charges determined have been added for each DIC in order to compute total transmission charges payable by the DIC.
  - b) The transmission charges are computed separately for both LTA/MTOA and STOA:
    - For LTA/MTOA billing in ₹: These charges are calculated only for withdrawal entities (withdrawal rates) and for generators having LTA to target region without identified beneficiaries.
    - For STOA billing in paise/kWh: These rates are calculated for all the states

- c) The notified transmission charges payable by DICs for the billing month of September'22 shall be used by RPCs for preparation of Regional Transmission Account (RTA) for the billing month of September'22 considering regional DIC wise break up of LTA/MTOA enclosed along with this notification.
- d) Transmission charges for STOA shall be payable by the generators and embedded entities located in the state as per the notified STOA rate of the state in which they are located.
- e) The notified transmission charges for STOA bilateral transactions shall be applicable for the applications received on or after 00:00 Hrs of the next day (D+1) following the date of this notification (D). In the case of STOA collective transactions, both DAM and RTM, the notified transmission charges shall be applicable from the delivery day D+2 following the date of this notification.
- f) The transmission charges payable by DICs for LTA/MTOA are given at **Annexure-III**.
- g) The transmission rates applicable for STOA transactions are given at **Annexure-IV**.
- h) Regional DIC wise break up of LTA/MTOA is given at **Annexure-V**.
- i) ISTS licensee wise break up of Monthly Transmission Charges (MTC) is given at **Annexure-VI**.
- j) Entity-wise details of bilateral billing are given separately at **Annexure-VII**.
- k) LTA details of exempted Renewable Energy (RE) based generation for the billing period of July'22 is given at **Annexure-VIII**.



(एस. सी. सक्सेना)

मुख्य महाप्रबंधक/ रा. भा. प्रे. के



**Annexure-I****Input Data furnished by DICs/ ISTS Licensees/ CTU**

1. As per Regulation 24(1) of Sharing Regulations 2020, some of the ISTS Licensees have submitted YTC data by 31.07.2022. Madhya Pradesh Power Transmission Co. Ltd., Adani Transmission Limited and Torrent Power Grid Ltd. have submitted YTC on 01.08.2022. PowerGrid has submitted its YTC and YTC of its SPV's on 04.08.2022. Sterlite Power has submitted YTC of its SPV's on 04.08.2022. Darbhanga-Motihari Transmission Co. Ltd. and NRSS XXXI (B) Transmission Ltd. have submitted YTC on 08.08.2022. Further, PowerGrid submitted revised YTC on 10.08.22. Power Transmission Corporation Of Uttarakhand Ltd. has submitted YTC on 17.08.2022. The list of ISTS licensees that have submitted YTC data is mentioned as below.

**List of ISTS Licensees submitted the YTC data for the billing period July'22**

<b>Sl. No.</b>	<b>Name of ISTS Licensee</b>
1	Powergrid Corporation Of India Ltd
2	Adani Transmission (India) Limited
3	Chhattisgarh-WR Transmission Limited.
4	Raipur Rajnandgaon-WR Transmission Limited.
5	Sipat Transmission Limited.
6	Western Transmission Gujarat Limited
7	Western Transco Power Limited
8	Alipurduar Transmission Limited
9	Fatehgarh-Bhadla Transmission Ltd.
10	North Karanpura Transco Limited
11	Bikaner-Khetri Transmission Limited
12	Jam Khambaliya Transco Limited
13	Jindal Power Limited
14	Kudgi Transmission Limited
15	Parbati Koldam Transmission Company Limited
16	Bhopal Dhule Transmission Company Ltd.
17	East North Interconnection Company Limited
18	Gurgaon Palwal Transmission Limited
19	Jabalpur Transmission Company Limited

Sl. No.	Name of ISTS Licensee
20	Maheshwaram Transmission Limited
21	Khargone Transmission Company Ltd.
22	Goa Tamnar Transmission Projects Limited
23	MUMBAI URJA MARG LIMITED
24	NRSS-XXIX Transmission Limited
25	Odisha Generation Phase-II Transmission Limited
26	Patran Transmission Company Limited
27	Purulia & Kharagpur Transmission Company Limited
28	Rapp Transmission Company Limited
29	NER-II Transmission Limited
30	Teestavalley Power Transmission Limited
31	Torrent Power Grid Limited
32	Darbhanga-Motihari Transmission Company Limited
33	NRSS XXXI (B) Transmission Limited
34	Kohima Mariani Transmission Limited
35	Raichur Sholapur Transmission Company Private Limited
36	Damodar Valley Corporation
37	Powerlinks Transmission Limited
38	Warora-Kurnool Transmission Limited
39	Powergrid Vizag Transmission Limited
40	Powergrid NM Transmission Limited
41	Powergrid Unchahar Transmission Limited
42	Powergrid Parli Transmission Limited
43	Powergrid Kala Amb Transmission Limited
44	Powergrid Southern Interconnector Transmission System Limited
45	Powergrid Jabalpur Transmission Limited
46	Powergrid Warora Transmission Limited
47	Powergrid Medinipur Jeerat Transmission Limited
48	Powergrid Mithilanchal Transmission Limited

Sl. No.	Name of ISTS Licensee
49	Powergrid Ajmer Phagi Transmission Limited
50	Powergrid Varanasi Transmissoin System Limited
51	Powergrid Fatehgarh Transmission Limited
52	Powergrid Khetri Transmission System Ltd.
53	North East Transmission Company Limited
54	Transmission Corporation Of Andhra Pradesh (APTRANSCO)
55	Madhya Pradesh Power Transmision Co. Ltd.
56	Power Transmission Corporation Of Uttarakhand Ltd
57	Haryana Vidyut Prasaran Nigam Limited

2. As per Sharing Regulations 2020 and NLDC notified Procedure for collection of data and information, CTU shall submit all required data and information as stipulated in Formats II(A) to II(G) within 7 days after the end of the billing period i.e by 07.08.2022. NLDC had provided the detailed list of ISTS assets of all licensees for segregation into various components as per stipulated formats on 05.08.2022. CTU has submitted data in formats II(C), II(D), II-(G2) to II-(G5) on 05.08.2022 and submitted data in formats II(A), II(B), II(E), II(F) & II-(G1) on 10.08.2022. Furthermore, CTU submitted revised format II(D) and II-G(3) on 22.08.2022.

3. As per Regulation 24(4) and NLDC notified Procedure for collection of data and information, DICs shall submit the required information to the Implementing Agency as stipulated in Formats III and IV for the billing period within 7 days after end of the billing period. The list of the DICs that have submitted the data by 07.08.2022 is as mentioned below:

S.NO.	WR	SR	NR	NER	ER	Others
1	Chattisgarh	Andhra Pradesh	Uttar Pradesh	Assam	Odisha	
2	Gujarat	Telangana	Haryana	Manipur		
3	MP	Karnataka	Himachal Pradesh	Meghalaya		
4	Maharashtra	Kerala	Delhi	Mizoram		
5	Goa	Tamil Nadu	Rajasthan	Nagaland		
6	D&D	Vallur(NTECL)	Punjab	Tripura		
7	DNH	IL&FS	BBMB	Palatana GBPP (OTPC)		

8	Hazira	Sprng Agnitra	ReNew Solar Power Private Limited			
9	ACBIL	Galiveedu (Karnal P1, Hisar P3 & Bhiwadi P6)				
10	Spectrum Power	Fortum Solar India Private Limited. (Pavagada Solar Park)				
11	Maruti Coal Power	PVG Renew-TN2				
12	BALCO	PVG ADYAH				
13	CGPL	PVG AMPLUS Tumkur and PVG AMPLUS Pavagada				
14	DB Power Ltd.	PVG Azure Earth				
15	DGEN	Fortum Finnsurya Energy Private Ltd. (Pavagada Solar Park)				
16	Dhariwal	Yarrow Infra Structure Private Ltd. (Pavagada Solar Park)				
17	GMR Warora	PVG Parampujya				
18	Raipur Energen					
19	Jindal Stg-1					
20	JPL Stg-2					
21	Jhabua Power					
22	JP Nigrie					
23	KAPS 1&2					
24	Raigarh Energy					
25	KSK Mahanadi					
26	LANCO					
27	MB Power					
28	Essar Mahan					
29	NSPCL Bhilai					

30	Ratnagiri Dabhol					
31	RKM Power					
32	Sasan UMPP					
33	SKS Power					
34	SSP					
35	TAPS (3,4)					
36	TRN Energy					
37	TAPS (1,2)					
38	Naranpar Ostro					
39	ACME RUMS					
40	Mahindra Renewables Pvt. Ltd.					
41	ARINSUM					
42	Bhuvad Renew					
43	Vadwa Green Infra					
44	Roha Green infra					
45	Dayapar Inox					
46	Ratadiya AGEMPL					
47	Alfanar wind					
48	Renew AP2 Gadhsisa					
49	Avikiran					
50	Powerica					

**Annexure-II****Methodology of the computations and assumptions followed in the basic network****a) Modeling of the Basic Network**

- A. The All India network was modeled with the help of network data and node wise generation and demand data furnished by DICs. Wherever network data has not been provided by DICs, network data already available at RLDCs/NLDC has been considered. Wherever technical parameters were not furnished, standard parameters as per CEA Manual on Transmission Planning Criteria have been used.
- B. Certain Transmission Lines included in the basic network were partly owned by ISTS Licensee and partly by STUs. There were cases where the existing lines originally owned by one utility have been made LILO by other utility. In cases where the line originally owned by ISTS Licensee has been made LILO by STU, the Monthly Transmission Charge for the entire line has been considered (including the section owned by STU). In cases where the line originally owned by STU has been made LILO by ISTS Licensee, the Monthly Transmission Charge for the entire line has not been considered.
- C. All India basic network up to 66/ 33 kV level and at some nodes even till 0.4 kV level has been prepared. As per the Sharing Regulations 2020, basic network means power system at voltage levels of 110 kV and above, containing all power system elements including generating station and transmission systems.
- D. In line with Sharing Regulations 2020, all India basic network has been truncated to 110 kV level. Power flow into lower voltage system has been considered as load at the substation at truncated point. Power flow from a lower voltage system has been considered as generation at the substation at truncated point.
- E. To account for the transmission losses of the truncated lower voltage network and to ensure state drawal as per SEM data corresponding to peak block, minor adjustments in states generation has been done.
- F. Interstate generating Stations (ISGS) connected at 220kV and below voltage level are created as separate control areas.
- G. Power flows on HVDC Bhadravati and HVDC Raigarh-Pugalur have been adjusted to avoid loop flows in the network.
- H. 400 kV Singrauli considered as slack bus.

**b) Load Generation balance for the basic network**

- A. Node wise generation and demand data for the peak block as submitted by DICs has been considered to prepare Load Generation balance.
- B. Wherever aggregate generation and demand data submitted by DICs, the generation and demand data has been distributed across the nodes of the DICs as per the node wise distribution of the TTC/ATC base case applicable for July'22.
- C. Wherever node wise generation and demand data has not been provided by DICs, SEM data/ SCADA data available with NLDC/RLDCs has been considered. In the absence of SEM/ SCADA data, the node wise generation and demand data as available from TTC/ ATC base case / recently submitted base case of states has been considered.

**c) Commercial Data considered in the computations**

- A. The data as submitted by the ISTS Licensees has been examined by NLDC and suitably considered for computation of transmission charges for DICs for the billing period July'22. For the ISTS licensees who have not submitted YTC data for July'22, the YTC data recently available with reference to the previous computations have been considered.

- B. While checking the YTC of the licensees who have not submitted data, the recently available CERC orders are referred to consider the recently available approved YTC for FY 2018-19 in case for 2019-20 or 2020-21 is not available.
- C. All ISTS transmission assets commissioned by the end of July'22 as furnished by ISTS licensees have been considered in the computations.
- D. Yearly Transmission Charges (YTC) based on approved/ adopted tariff by CERC has only been considered in line with Sharing Regulations 2020. RPC certified non-ISTS lines as ISTS lines have not been considered in the computations.
- E. The assets of State Utilities whose approved Tariff by the Commission is not available as on 31.03.2019 are not being considered in the computations since 2019-20 Q3 in line with Terms & Conditions of Tariff Regulations. The same is continued in this computation.
- F. As per minutes of Validation Committee meeting held for 2020-21 Q2 PoC computations, for the assets of Essar Power transmission limited, combined tariff of LILO of 400kV Vindhychal-Korba at Mahan, GIS S/s at Hazira and 400kV Hazira-Gandhar line) was being excluded from PoC computations in the absence of exclusive tariff of LILO of 400kV Vindhychal-Korba at Mahan since 2020-21 Q2. As per CERC Order dated 04.06.2021 in I.A. No. 32/2021 in Petition No. 92/MP/2021, Exclusive tariff of 400kV Hazira-Gandhar Line and GIS S/s at Hazira has been approved and same has been considered for billing period July'22.
- G. As per Regulation (13) clauses (3), (6), (9), the YTC of assets claimed by licensees have been examined to find out whether the YTC to be completely or partly billed to generators. Accordingly, transmission charges have been computed for DICs in line with the Regulations.
- H. All ISTS assets corresponding to the bilateral payments on the basis of information furnished by ISTS licensees and the worked out bilateral payments in line with Regulation (13) have been considered while preparing final transmission charges for DICs.
- I. The components of Yearly Transmission Charges such as National Component for RE (NC-RE), National Component for HVDC (NC-HVDC), Regional Component (RC) and Transformers Component (TC) have been worked out on the basis of the inputs furnished by CTU.
- J. Indicative cost level of different conductor configuration was provided by CTU and is as follows:

Sl. No.	Voltage level (kV)	Type of conductor configuration	Indicative cost (Rs.Lakh/km)
1	± 800	HVDC	348
2	± 500	HVDC	170
3	765	D/C	484
4	765	S/C	221
5	400	S/C	93
6	400	M/C TWIN	432
7	400	D/C Quad Moose	282
8	400	D/C Twin HTLS	199
9	400	D/C Twin Moose	163

10	400	M/C QUAD	813
11	400	D/C TRIPLE	229
12	400	S/C QUAD	155
13	220	D/C	68
14	220	S/C	52
15	220	M/C TWIN	311
16	132	D/C	45
17	132	S/C	26
18	132	M/C TWIN	215

- K. The indicative cost levels provided by CTU are for only selected configurations and voltage level. Hence, for the conductor configurations which are not mentioned in the above list, following assumptions have been made:
- The indicative cost level of 765 kV lines (Quad Bersimis) charged at 400 kV has been considered to be same as cost of one circuit of 400 kV Quad Moose D/C.
  - The indicative cost level of 400 kV Quad Bersimis D/C has been considered to be same as 400 kV Quad Moose D/C.
  - The indicative cost level of 765 kV Hexa zebra has been considered to be same as 765 kV Quad Bersimis.
  - The indicative cost levels of 400 kV ACKC, ACAR, AAAC, Moose, Zebra and Lapwing have been considered to be same as 400 kV Twin Moose depending on the no. of circuits.
  - 400 kV lines (Twin Moose) charged at 220 kV are charged as per the rate of 220 kV D/C lines.
- L. Circuit Kms of RE lines considered as National component has been considered as zero.
- M. Circuit Kms of the assets covered under Regulation (13) clauses (3), (6), (9), have been pro-rata adjusted with respect to YTC considered for bilateral payment wherever YTC are to be partly included in the computations.

**d) Computation of Usage part of AC system charges**

- The usage part of AC system charges has been computed by running AC load flow and determining the utilization of the lines with respect to SIL of the lines. For SIL of lines at various voltage levels, annexure-II to Regulations has been followed.
- AC Usage Base Charges (AC-UBC) thus determined has been used for apportionment through hybrid method and computed total aggregated nodal charges in ₹ for each drawee DIC and injecting DICs having untied LTA.



**Transmission Charges for Designated ISTS Customers (DICs) for the billing month of September,2022**

S.No.	Zone	Region	LTA Demand / Injection (in MW)	Usage based AC system charges (₹)	Balance AC system charges (₹)	National Component (₹)		Regional Component (₹)	Transformers component (₹)	Bilateral Charges (₹)	Total Transmission charges payable in ₹
				AC-UBC	AC-BC	NC-RE	NC-HVDC	RC	TC		
1	Delhi	NR	4170	398406587	760363074	80058812	93753550	210925858	55540734		1599048614
2	UP	NR	9585	1225226725	1747619762	184007307	215483316	484792344	141347497	3671419	4002148371
3	Punjab	NR	5434	475867008	990815206	104323173	122168535	274853625	104809966	935605	2073773118
4	Haryana	NR	4302	616450720	784410404	82590761	96718610	217596623	185718510		1983485628
5	Chandigarh	NR	352	12666247	64225955	6762366	7919126	17816376	3122402		112512473
6	Rajasthan	NR	4178	450871598	761811207	80211286	93932106	211327572	92988935	2148852	1693291557
7	HP	NR	1683	22324498	306907201	32314333	37841974	85136518	24781306	51489065	560794897
8	J&K	NR	2305	49469161	420299548	44253441	51823367	116591725	55404477		737841720
9	Uttarakhand	NR	1361	162063177	248188458	26131823	30601892	68847851	30233785	2624468	568691454
10	GMR Kamalanga	NR	75	3198408	13675059	1439850	1686149	3793482			23792948
11	WBSEDCL_Inj	NR	600	0	109400471	11518802	13489191	30347855			164756318
12	MB Power	NR	175	33341912	31908471	3359651	3934347	8851458			81395838
13	Jorthang	NR	86.4	10318859	15753668	1658707	1942443	4370091			34043769
14	Tashiding	NR	87.3	10894157	15917768	1675986	1962677	4415613			34866202
15	Northern Railways	NR							2523524		2523524
16	North Central Railways	NR							2082900		2082900
17	RAPP 7&8, NPCIL	NR								33406195	33406195
18	Adani Renewable Energy Park Rajasthan Limited	NR								3235548	3235548
19	ACME Solar Holdings Pvt. Ltd	NR								1954752	1954752
20	Essel Saurya Urja Company of Rajasthan Limited (ESUCRL)	NR								4564996	4564996
21	Gujarat	WR	9242	530001460	1685071307	177421565	207771027	124958978	54007837	12549133	2791781306
22	Madhya Pradesh	WR	7757	517662447	1414412579	148923843	174398527	104887876	123282484	1235668	2484803424
23	Maharashtra	WR	7131	748257283	1300271114	136905860	160324767	96423545	79916858		2522099427
24	Chhattisgarh	WR	2890	85654308	526917057	55479224	64969416	39074321	23030847		795125173

S.No.	Zone	Region	LTA Demand / Injection (in MW)	Usage based AC system charges (₹)	Balance AC system charges (₹)	National Component (₹)		Regional Component (₹)	Transformers component (₹)	Bilateral Charges (₹)	Total Transmission charges payable in ₹
				AC-UBC	AC-BC	NC-RE	NC-HVDC	RC	TC		
25	Goa	WR	513	53056435	93608031	9856012	11541967	6941643	10592365	1254778	186851232
26	DNHDDPDCL	WR	1481	122071153	270002261	28428603	33291557	20022421	27166061		500982055
27	Jindal Power Limited	WR	125	67289189	22791765	2399750	2810248	1690157			96981109
28	ACB Ltd	WR	50	4676525	9104942	958662	1122649	675191			16537968
29	Torrent Power	WR	200	352446	36466824	3839601	4496397	2704252			47859519
30	Sembcorp Energy India Ltd Project-I	WR	115	10001409	20968424	2207770	2585428	1554945			37317976
31	DB Power	WR	186	21397973	33914146	3570829	4181649	2514954			65579551
32	TRN Energy Pvt. Ltd.	WR	3	231036	547002	57594	67446	40564			943642
33	CSPTCL	WR	261	0	47589205	5010679	5867798	3529049			61996730
34	WBSEDCL_Inj	WR	400	0	72933647	7679201	8992794	5408503			95014146
35	GMR Warora Energy Ltd, Maharashtra	WR	45	1796137	8130278	856039	1002472	602913			12387839
36	MB Power	WR								8993256	8993256
37	Adani Power Limited	WR								285612071	285612071
38	Essar Steel	WR							8805858		8805858
39	Powerica Ltd.	WR								18913550	18913550
40	For Mahan Energen Limited (formerly Essar Power M.P. Ltd)	WR								62607665	62607665
41	Andhra Pradesh	SR	1728	233439546	315117807	33178830	38854350	29179010	35559464		685329007
42	Telangana	SR	3895	203409536	710135141	74770301	87560394	65756488	35565151		1177197010
43	Tamil Nadu	SR	8401	382392452	1531812969	161284958	188874116	141841510	94701954		2500907960
44	Kerala	SR	2739	159401496	499456135	52587857	61583456	46248213	51939269		871216426
45	Karnataka	SR	3999	340846409	729187427	76776321	89909560	67520675	100520494	3551241	1408312128
46	Pondicherry	SR	533	13379884	97199607	10234170	11984812	9000406	12854861		154653739
47	Goa-SR	SR	93	57102	16971304	1786913	2092579	1571494			22479392

S.No.	Zone	Region	LTA Demand / Injection (in MW)	Usage based AC system charges (₹)	Balance AC system charges (₹)	National Component (₹)		Regional Component (₹)	Transformers component (₹)	Bilateral Charges (₹)	Total Transmission charges payable in ₹
				AC-UBC	AC-BC	NC-RE	NC-HVDC	RC	TC		
48	Sembcorp Energy India Ltd Project-I	SR	55	4783283	10028376	1055890	1236509	928599		113512	18146170
49	Sembcorp Energy India Ltd Project-II	SR	490	0	89343718	9407022	11016172	8272973		7007360	125047246
50	BHAVINI	SR								20469173	20469173
51	Betam	SR								483770	483770
52	AP Solar Power Corporation Pvt Ltd (APSPCL)	SR								1276471	1276471
53	West Bengal	ER	2409	228993841	439292889	46253255	54165265	65466787	48332935		882504972
54	Odisha	ER	1766	99689541	321964739	33899745	39698584	47981648	71026853		614261109
55	Bihar	ER	6003	280433149	1094489672	115239082	134951703	163109223	175049604		1963272434
56	Jharkhand	ER	708	41972875	129153302	13598582	15924735	19247413	51065945	9869089	280831942
57	Sikkim	ER	97	941468	17661096	1859541	2177631	2631992	2688795		27960523
58	DVC	ER	640	43230026	116778466	12295633	14398905	17403220	9385005		213491255
59	Bangladesh	ER	782	7492771	142664456	15021175	17590674	21260948			204030024
60	Arunachal Pradesh	NER	288	3250222	52468488	5524420	6469419	8993762	13959727		90666038
61	Assam	NER	1628	109770919	296882367	31258816	36605901	50889387	23036572	1016063	549460026
62	Manipur	NER	210	9905524	38314165	4034108	4724176	6567532	3999964		67545468
63	Meghalaya	NER	264	4414480	48167779	5071597	5939137	8256566	392447		72242006
64	Mizoram	NER	137	6587267	24967104	2628792	3078470	4279677	1532249		43073558
65	Nagaland	NER	194	8294161	35418677	3729241	4367159	6071209	24170597		82051045
66	Tripura	NER	302	5839840	55121652	5803772	6796556	9448547	23697326		106707694
<b>TOTAL</b>			<b>102156.54</b>	<b>7822072651</b>	<b>18626622170</b>	<b>1961201553</b>	<b>2296681690</b>	<b>2952623580</b>	<b>1804835557</b>	<b>538983702</b>	<b>36003020904</b>

**Transmission Charges to be paid by DICs under Regulation 13(7)**

Where Long Term Access is granted to a generating station on existing margins and COD of the generating station or unit(s) thereof is delayed

Sl.No.	Name of Generating Station	State	Capacity	LTA granted	Commissioned capacity	Date of Commercial Operation	Date of LTA Operationalization	Delayed Capacity	Transmission Charges (₹)	Remarks
1	ReNew Power Pvt Limited	Karnataka		300	174.3	63 MW: 25.09.21 10.5MW: 12.10.21 10.5MW: 20.10.21 16.8MW: 27.10.21 14.7MW: 13.11.21 10.5MW: 01.12.21 10.5MW: 18.12.21 37.8MW: 27.07.22	63 MW: 24.09.21 10.5 MW: 11.10.21 12.6 MW: 19.10.21 14.7 MW: 26.10.21 16.8 MW: 11.11.21 10.5 MW: 23.11.21 10.5 MW: 30.11.21 35.7MW: 27.07.22		61867	Charges computed for 26 days corresponding to 2.1 MW
2	Ostro Kutch Wind Private Ltd	Gujarat		300	46.2	11 MW: 13.11.2021; 11MW: 04.12.2021, 13.2MW: 30.03.2022 11MW: 10.05.2022	50MW: 14.04.19	3.8	114277	
3	ReNew Power Limited	Gujarat		300	230.1	126MW:18.05.19 58.5MW: 01.10.19 27.6MW: 02.09.20 18MW: 07.02.2021	300MW: 01.05.19	69.9	2102092	
4	ReNew Power Limited	Gujarat		50	0	Yet to be commissioned	50MW: 23.11.19	50	1503642	
5	Masaya Solar Energy Private Ltd	Madhya Pradesh		300			300 MW: 25.03.2022	300	9604817	
6	NTPC LTD. (Auraiya Floating Solar)	Uttar Pradesh		20			20 MW: 11.04.2022	20	834345	
7	NTPC Kawas (Solar)	Gujarat		39.50	24.69	14.11MW: 14.05.22 10.58MW: 15.06.2022	14.11MW: 27.05.2022 10.58MW: 31.05.2022 14.81MW: 24.06.2022	14.81	445379	
8	NTPC Kawas (Solar)	Gujarat		16.50	10.31	5.89MW: 14.05.22 4.42MW:15.06.2022	5.89MW: 27.05.2022 4.42MW: 31.05.2022 6.19MW: 24.06.2022	6.19	186151	
9	NTPC Gandhar (Solar)	Gujarat		14.11		-	14.11MW: 09.05.2022	14.11	424328	
10	NTPC Gandhar (Solar)	Gujarat		5.89		-	5.89MW: 09.05.2022	5.89	177129	

**Transmission Charges for Short Term Open Access (STOA)**

S.No.	State	Region	STOA rate (paise/kWh)
1	Delhi	NR	53.26
2	UP	NR	57.94
3	Punjab	NR	52.98
4	Haryana	NR	64.04
5	Chandigarh	NR	44.36
6	Rajasthan	NR	56.22
7	HP	NR	42.02
8	J&K	NR	44.46
9	Uttarakhand	NR	57.76
10	Gujarat	WR	41.77
11	Madhya Pradesh	WR	44.47
12	Maharashtra	WR	49.12
13	Chhattisgarh	WR	38.21
14	Goa	WR	50.21
15	Daman and Diu and Dadra and Nagar Haveli	WR	46.99
16	Andhra Pradesh	SR	55.08
17	Telangana	SR	41.98
18	Tamil Nadu	SR	41.35
19	Kerala	SR	44.17
20	Karnataka	SR	48.79
21	Pondicherry	SR	40.29
22	Goa-SR	SR	33.54
23	West Bengal	ER	50.87
24	Odisha	ER	48.31
25	Bihar	ER	45.43
26	Jharkhand	ER	53.13
27	Sikkim	ER	40.09
28	DVC	ER	46.30
29	Bangladesh	ER	36.22
30	Arunachal Pradesh	NER	43.76
31	Assam	NER	46.78
32	Manipur	NER	44.64
33	Meghalaya	NER	37.98
34	Mizoram	NER	43.69
35	Nagaland	NER	58.67
36	Tripura	NER	49.02

**Regional DIC wise break up of LTA/MTOA considered in the computations**

Sl.No.	Name of the DIC	Region	LTA/MTOA considered in the computations	Name of the state control area in which LTA/MTOA of specific DICs is included in the computations*
1	UP	NR	9153.03	
2	Delhi	NR	4155.16	
3	Haryana	NR	4243.75	
4	Uttarakhand	NR	1361.17	
5	Punjab	NR	5399.06	
6	Rajasthan	NR	4167.15	
7	Himachal Pradesh	NR	1683.21	
8	Jammu & Kashmir	NR	2305.11	
9	Chandigarh	NR	352.24	
10	Noida Power Company Ltd, UP	NR	170.00	Uttar Pradesh
11	Railways_UP	NR	256.88	Uttar Pradesh
12	Railways_Haryana	NR	55.00	Haryana
13	Railways_Delhi	NR	15.00	Delhi
14	Railways_Rajasthan	NR	10.00	Rajasthan
15	Railways_Punjab	NR	35.00	Punjab
16	PG-Rihand	NR	0.74	Uttar Pradesh
17	PG-Dadri	NR	0.76	Uttar Pradesh
18	PG-Agra	NR	2.36	Uttar Pradesh
19	PG-Balia	NR	0.95	Uttar Pradesh
20	PG-Bhiwadi	NR	0.95	Rajasthan
21	PG-Kurukshetra	NR	3.30	Haryana
22	MB Power	NR	175.00	
23	WBSEDCL	NR	600.00	
24	GMR Kamalanga Energy Pvt. Ltd	NR	75.00	
25	Jorthang	NR	86.40	
26	Tashiding	NR	87.30	
27	Gujarat	WR	9228.79	
28	Madhya Pradesh	WR	7547.57	
29	Chhattisgarh	WR	2884.78	
30	Maharashtra	WR	6999.07	
31	GOA	WR	513.39	
32	D&D and DNH	WR	1480.81	
33	HVDC Bhadravathi	WR	0.91	Maharashtra
34	HVDC Vindhyachal	WR	0.69	Madhya Pradesh
35	BARC Facility	WR	9.10	Maharashtra
36	Heavy Water Plant of DAE	WR	12.88	Gujarat
37	HVDC Champa	WR	3.19	Chhattisgarh
38	HVDC Raigarh	WR	1.88	Chhattisgarh
39	Railways_MP	WR	209.00	Madhya Pradesh
40	Railways_Maharashtra	WR	122.18	Maharashtra
41	ACB Ltd.	WR	49.94	
42	JINDAL	WR	125.00	
43	Torrent Power	WR	200.00	

Sl.No.	Name of the DIC	Region	LTA/MTOA considered in the computations	Name of the state control area in which LTA/MTOA of specific DICs is included in the computations*
44	DB Power	WR	186.00	
45	GMR Warora Energy Ltd, Maharashtra	WR	44.59	
46	CSPTCL	WR	261.00	
47	TRN Energy Pvt. Ltd.	WR	3.00	
48	Sembcorp Energy India Ltd	WR	115.00	
49	WBSEDCL	WR	400.00	
50	BIHAR	ER	5901.75	
51	JHARKHAND	ER	708.33	
52	DVC	ER	330.46	
53	ORISSA	ER	1765.80	
54	WEST BENGAL	ER	2407.87	
55	SIKKIM	ER	96.86	
56	Bangladesh	ER	782.43	
57	TATA Steel Ltd.	ER	200.00	DVC
58	Railways_Bihar	ER	100.00	Bihar
59	Railways_DVC	ER	110.00	DVC
60	HVDC Alipurduar	ER	1.41	West Bengal
61	POWERGRID PUSAULI	ER	0.91	Bihar
62	Andhra Pradesh	SR	1725.77	
63	Karnataka	SR	3987.68	
64	KSEB	SR	2738.13	
65	Tamil Nadu	SR	8384.56	
66	Telangana	SR	3894.69	
67	Puducherry	SR	533.09	
68	Goa	SR	93.08	
69	SAIL, Salem	SR	13.65	Tamil Nadu
70	Railways_Karnataka	SR	10.00	Karnataka
71	PG-HVDCGazuwaka	SR	0.98	Andhra Pradesh
72	PG-HVDCTalcher	SR	1.50	Andhra Pradesh
73	PG-HVDCKolar	SR	1.50	Karnataka
74	PG-HVDC Pugalur	SR	2.92	Tamil Nadu
75	PG-HVDC Thrissur	SR	1.11	Kerala
76	Sembcorp Energy India Ltd Project-I	SR	55.00	
77	Sembcorp Energy India Ltd Project-II	SR	490.00	
78	Arunachal Pradesh	NER	287.76	
79	Assam	NER	1621.87	
80	Manipur	NER	210.13	
81	Meghalaya	NER	264.17	
82	Mizoram	NER	136.93	
83	Nagaland	NER	194.25	
84	Tripura	NER	302.31	
85	PG-HVDC BNC	NER	1.37	Assam
86	Railway_Assam	NER	5.00	Assam
<b>TOTAL</b>			<b>102156.538</b>	

*\*Note: Transmission charges of the state are to be shared on prorata basis on the basis of LTA/MTOA of the DICs included in the state's control area as mentioned in the table*

**Annexure-VI****Transmission Charges claimed by ISTS licensees for the billing period July'22**

S.No.	Name of the Transmission Licensee	Total YTC claimed by Licensees (₹ Cr)	Total YTC allowed for July'22 (₹ Cr)	Equivalent MTC to be considered for July'22 (₹ Cr)	Remarks
1	Powergrid Corporation Of India Ltd	33197.46	33197.46	2819.51	As per data furnished by ISTS Licensee for July'22. MTC of the assets listed under Regulation 13(3) shall be partly settled through the bilateral payments from respective entities as detailed in the transmission charges bill. PowerGrid assets for bilateral payments as mentioned in format I-C are also included in this total YTC claimed.
2	Adani Transmission (India) Limited	618.87	618.87	52.56	As per data furnished by ISTS Licensee for July'22
3	Chhattisgarh-WR Transmission Limited.	165.00	165.00	14.01	As per data furnished by ISTS Licensee for July'22
4	Raipur Rajnandgaon-WR Transmission Limited.	219.74	219.74	18.66	As per data furnished by ISTS Licensee for July'22
5	Sipat Transmission Limited.	94.92	94.92	8.06	As per data furnished by ISTS Licensee for July'22
6	Western Transmission Gujarat Limited	53.00	53.00	4.50	As per data furnished by ISTS Licensee for July'22
7	Western Transco Power Limited	97.41	97.41	8.27	As per data furnished by ISTS Licensee for July'22
8	Alipurduar Transmission Limited	153.02	153.02	13.00	As per data furnished by ISTS Licensee for July'22
9	Fatehgarh-Bhadla Transmission Ltd.	48.09	48.09	4.08	As per data furnished by ISTS Licensee for July'22
10	North Karanpura Transco Limited	23.64	23.64	2.01	As per data furnished by ISTS Licensee for July'22
11	Bikaner-Khetri Transmission Limited	128.95	128.95	10.95	As per data furnished by ISTS Licensee for July'22
12	Jam Khambaliya Transco Limited	40.36	40.36	3.43	As per data furnished by ISTS Licensee for July'22
13	Aravali Power Company Private Limited	10.42	10.42	0.88	Data not furnished for July'22. Considered the same as in the earlier billing period.
14	Essar Power Transmission Company Limited	405.68	405.68	34.45	Data not furnished for July'22. Considered the same as in the earlier billing period.
15	Jindal Power Limited	19.12	19.12	1.62	As per data furnished by ISTS Licensee for July'22
16	Kudgi Transmission Limited	196.29	196.29	16.67	As per data furnished by ISTS Licensee for July'22
17	Parbati Koldam Transmission Company Limited	171.37	171.37	14.55	As per data furnished by ISTS Licensee for July'22
18	Bhopal Dhule Transmission Company Ltd.	260.51	260.51	22.13	As per data furnished by ISTS Licensee for July'22
19	East North Interconnection Company Limited	144.63	144.63	12.28	As per data furnished by ISTS Licensee for July'22
20	Gurgaon Palwal Transmission Limited	140.93	140.93	11.97	As per data furnished by ISTS Licensee for July'22
21	Jabalpur Transmission Company Limited	146.99	146.99	12.48	As per data furnished by ISTS Licensee for July'22
22	Maheshwaram Transmission Limited	55.99	55.99	4.76	As per data furnished by ISTS Licensee for July'22
23	Khargone Transmission Company Ltd.	182.13	182.13	15.47	As per data furnished by ISTS Licensee for July'22
24	Goa Tamnar Transmission Projects Limited	42.64	42.64	3.62	As per data furnished by ISTS Licensee for July'22
25	MUMBAI URJA MARG LIMITED	29.08	29.08	2.31	Asset Commissioned on 03.07.2022. So, MTC is considered for 29 days.
26	NRSS-XXIX Transmission Limited	501.95	501.95	42.63	As per data furnished by ISTS Licensee for July'22
27	Odisha Generation Phase-II Transmission Limited	154.24	154.24	13.10	As per data furnished by ISTS Licensee for July'22
28	Patran Transmission Company Limited	30.73	30.73	2.61	As per data furnished by ISTS Licensee for July'22
29	Purulia & Kharagpur Transmission Company Limited	72.43	72.43	6.15	As per data furnished by ISTS Licensee for July'22
30	Rapp Transmission Company Limited	44.03	44.03	3.74	As per data furnished by ISTS Licensee for July'22
31	NER-II Transmission Limited	412.53	412.53	35.04	As per data furnished by ISTS Licensee for July'22
32	Teestavalley Power Transmission Limited	257.15	257.15	21.84	As per data furnished by ISTS Licensee for July'22
33	Torrent Power Grid Limited	39.40	39.40	3.35	As per data furnished by ISTS Licensee for July'22
34	Darbhanga-Motihari Transmission Company Limited	134.73	134.73	11.44	As per data furnished by ISTS Licensee for July'22
35	NRSS XXXI (B) Transmission Limited	98.09	98.09	8.33	As per data furnished by ISTS Licensee for July'22
36	Jaypee Powergrid Limited	138.41	138.41	11.76	Data not furnished for July'22. Considered the same as in the earlier billing period.
37	Kohima Mariani Transmission Limited	237.50	237.50	20.17	As per data furnished by ISTS Licensee for July'22
38	Raichur Sholapur Transmission Company Private Limited	35.20	35.20	2.99	As per data furnished by ISTS Licensee for July'22
39	Damodar Valley Corporation	109.09	109.09	9.26	As per data furnished by ISTS Licensee for July'22
40	Powerlinks Transmission Limited	137.17	137.17	11.65	As per data furnished by ISTS Licensee for July'22
41	NRSS XXXVI Transmission Limited	1.28	1.28	0.11	Data not furnished for July'22. Considered the same as in the earlier billing period.



S.No.	Name of the Transmission Licensee	Total YTC claimed by Licensees (₹ Cr)	Total YTC allowed for July'22 (₹ Cr)	Equivalent MTC to be considered for July'22 (₹ Cr)	Remarks
42	Warora-Kurnool Transmission Limited	6.21	6.21	0.53	As per data furnished by ISTS Licensee for July'22
43	Powergrid Vizag Transmission Limited	234.47	234.47	19.91	As per data furnished by ISTS Licensee for July'22
44	Powergrid NM Transmission Limited	111.40	111.40	9.46	As per data furnished by ISTS Licensee for July'22
45	Powergrid Unchahar Transmission Limited	19.76	19.76	1.68	As per data furnished by ISTS Licensee for July'22
46	Powergrid Parli Transmission Limited	326.22	326.22	27.71	As per data furnished by ISTS Licensee for July'22
47	Powergrid Kala Amb Transmission Limited	68.66	68.66	5.83	As per data furnished by ISTS Licensee for July'22. Bilateral payment of HPSEB is also included in the claimed YTC
48	Powergrid Southern Interconnector Transmission System Limited	462.10	462.10	39.25	As per data furnished by ISTS Licensee for July'22
49	Powergrid Jabalpur Transmission Limited	256.43	256.43	21.78	As per data furnished by ISTS Licensee for July'22
50	Powergrid Warora Transmission Limited	364.20	364.20	30.93	As per data furnished by ISTS Licensee for July'22
51	Powergrid Medinipur Jeerat Transmission Limited	555.23	555.23	47.16	As per data furnished by ISTS Licensee for July'22
52	Powergrid Mithilanchal Transmission Limited	170.00	170.00	14.44	As per data furnished by ISTS Licensee for July'22
53	Powergrid Ajmer Phagi Transmission Limited	63.57	63.57	5.40	As per data furnished by ISTS Licensee for July'22
54	Powergrid Varanasi Transmissoin System Limited	116.97	116.97	9.93	As per data furnished by ISTS Licensee for July'22
55	Powergrid Fatehgarh Transmission Limited	74.54	74.54	6.33	As per data furnished by ISTS Licensee for July'22
56	Powergrid Khetri Transmission System Ltd.	126.71	126.71	10.76	As per data furnished by ISTS Licensee for July'22
57	North East Transmission Company Limited	260.21	260.21	22.10	As per data furnished by ISTS Licensee for July'22
58	Transmission Corporation Of Andhra Pradesh (APTRANSCO)	439.71	44.86	3.81	As per data furnished by ISTS Licensee for July'22
59	Madhya Pradesh Power Transmision Co. Ltd.	12.54	12.54	1.06	As per data furnished by ISTS Licensee for July'22
60	Karnataka Power Transmission Corporation Limited	1.42	1.42	0.12	Data not furnished by ISTS Licensee for July'22. CERC Tariff Order dated 12.06.2019 has been considered
61	Delhi Transco Limited	3.12	3.12	0.26	Data not furnished by ISTS Licensee for July'22. Data as furnished by ISTS Licensee for Dec'20 has been considered.
62	Power Transmission Corporation Of Uttarakhand Ltd	43.42	43.42	3.69	Data furnished by ISTS Licensee for July'22. CERC Tariff Order dated 09.11.2021 , 25.11.2021 and 13.06.2021 have been considered.
63	Rajasthan Rajya Vidhyut Prasaran Nigam Ltd.	33.98	6.37	0.54	Data not furnished by ISTS Licensee for July'22. Data as furnished by ISTS Licensee for Jan'21 has been considered. RPC certified non-ISTS as ISTS has not been considered in line with clause 13 (13) of Sharing Regulations,2020
64	Tamilnadu Transmission Corporation Limited	0.59	0.59	0.05	Data not furnished by ISTS Licensee for July'22. CERC Tariff 148/TT/2018 Order dated 16.11.2018 has been considered
65	Chhattisgarh State Power Transmission Company Ltd	0.75	0.75	0.06	Data not furnished for July'22. Considered the same as in the earlier billing period.
66	Himachal Pradesh Power Transmission Corporation Ltd	2.61	2.61	0.22	Data not furnished for July'22. Considered the same as in the earlier billing period.
67	Odisha Power Transmission Corporation Limited	9.80	9.67	0.82	Data not furnished by ISTS Licensee for July'22. Data as furnished by ISTS Licensee for Jan'21 has been considered. Filing and Publication fee of ₹ 13.67 Lacs as claimed by the licensee is not considered. The same may be claimed in Bill-2 or Bill-3 as applicable.
68	Uttarpradesh Power Transmission Corporation Limited	27.23	0.00	0.00	Data not furnished by ISTS Licensee for July'22. YTC has been considered as zero in line with CERC terms & conditions for Tariff Regulations 2019 as tariff as on 31.03.2019 is not available
69	Power Development Department, Jammu & Kashmir	10.11	0.00	0.00	Data not furnished by ISTS Licensee for July'22. YTC has been considered as zero in line with CERC terms & conditions for Tariff Regulations 2019 as tariff as on 31.03.2019 is not available
70	Gujarat Energy Transmission Corporation Limited	5.71	0.00	0.00	Data not furnished by ISTS Licensee for July'22. YTC has been considered as zero in line with CERC terms & conditions for Tariff Regulations 2019 as tariff as on 31.03.2019 is not available
71	Maharashtra State Electricity Transmission Company Ltd	97.68	0.00	0.00	Data not furnished by ISTS Licensee for July'22. YTC has been considered as zero in line with CERC terms & conditions for Tariff Regulations 2019 as tariff as on 31.03.2019 is not available
72	West Bengal State Electricity Transmission Company Ltd	32.05	0.00	0.00	Data not furnished by ISTS Licensee for July'22. YTC has been considered as zero in line with CERC terms & conditions for Tariff Regulations 2019 as tariff as on 31.03.2019 is not available

S.No.	Name of the Transmission Licensee	Total YTC claimed by Licensees (₹ Cr)	Total YTC allowed for July'22 (₹ Cr)	Equivalent MTC to be considered for July'22 (₹ Cr)	Remarks
73	Haryana Vidyut Prasaran Nigam Limited	0.34	0.34	0.03	As per data furnished by ISTS Licensee for July'22
74	Assam Electricity Grid Corporation Limited	10.78	0.00	0.00	Data not furnished by ISTS Licensee for July'22. YTC has been considered as zero in line with CERC terms & conditions for Tariff Regulations 2019 as tariff as on 31.03.2019 is not available
75	Meghalaya Power Transmission Corporation Limited	3.61	0.00	0.00	Data not furnished by ISTS Licensee for July'22. YTC has been considered as zero in line with CERC terms & conditions for Tariff Regulations 2019 as tariff as on 31.03.2019 is not available
76	Kerala State Electricity Board	10.06	0.00	0.00	Data not furnished by ISTS Licensee for July'22. YTC has been considered as zero in line with CERC terms & conditions for Tariff Regulations 2019 as tariff as on 31.03.2019 is not available

TOTAL MTC considered for the billing period July'22 from the claimed assets of ISTS licensees (₹ Crores)

**3600.30**

Details of Entity-wise bilateral billing

Sl.No.	Name of the Asset	Transmission Licensee	Name of the beneficiary	Region	MTC in ₹	State Control Area in which the Bilateral charges are included	Remarks
1	02 Nos of 132 kV line bays at Daltonganj Substation	Powergrid	Jharkhand Urja Sancharan Nigam Limited (JUSNL)	ER	832668	Jharkhand	As per Regulation 13(12) of Sharing Regulations 2020
2	04 Nos. 220 KV Bays at Daltonganj Sub-station;	Powergrid					
3	220 kV, 2 nos. Line bays at Hamirpur Sub-station	Powergrid	Himachal Pradesh Power Transmission Corporation Limited (HPPTCL)	NR	1314230	Himachal Pradesh	As per Regulation 13(12) of Sharing Regulations 2020
4	02 Nos. 220 KV Line Bays (HPSEB Future Bays)	Powergrid	Himachal Pradesh State Electricity Board (HPSEB)	NR	50174835	Himachal Pradesh	As per Regulation 13(12) of Sharing Regulations 2021
5	GIS substation 7X105 MVA (1-ph), 400/220 kV at Kala Amb (Himachal Pradesh) and LLO of Karcham Wangtoo - Abdullapur 400 kV D/C	Powergrid					As per Regulation 13(12) of Sharing Regulations 2022
6	220kV, 2 Nos. Line bays at Jallandhar Substation	Powergrid	Punjab State Transmission Corporation Limited (PSTCL)	NR	935605	Punjab	As per Regulation 13(12) of Sharing Regulations 2020
7	Asset-B(ii) 2 nos. 220 kV Line Bays at Kotputli S/S	Powergrid	Rajasthan DISCOMS	NR	1000068	Rajasthan	As per Regulation 13(12) of Sharing Regulations 2021
8	2 nos. 220 kV line bays (#211 and 212) at 400/220 kV Jaipur (South) Substation	Powergrid	Rajasthan Rajya Vidyut Prasaran Nigam Limited (RRVPL)	NR	1148784	Rajasthan	As per Regulation 13(12) of Sharing Regulations 2022
9	400KV D/C Kota - Jaipur (South) line along with associated bays at Kota and Jaipur(South) (part of RAPPJaipur (S) 400KV D/C line with one ckt LLO at Kota)	Powergrid	RAPP 7&8, NPCIL	NR	33406195		As per Regulation 13(3) of Sharing Regulations 2020
10	One No. 220kv line Bays (206 no. Bay) associated with Baghpat GIS Substation	Powergrid	Uttar Pradesh Power Transmission Corporation Limited (UPPTCL)	NR	3671419	Uttar Pradesh	As per Regulation 13(12) of Sharing Regulations 2020
11	One No. 220kv line Bays (207 no. Bay) associated with Baghpat GIS Substation						
12	1 no. 220 kV line bay (# 210) of Shahjahanpur (PG)-Shahjahanpur (UPPTCL) at 400/220 kV Shahjahanpur Sub-Station						
13	2X500MVA 400/230kV transformers along with associated bays and equipment at new 400/230kV (GIS) Tirunelveli Pooling Sub-station	Powergrid	Betam	SR	483770		As per Regulation 13(3) of Sharing Regulations 2020
14	Asset 1. Kalpakkam PFBR-Sirucher 230 kV D/C Line, Asset 2. Kalpakkam PFBR - Arani 230 KV D/C Line, Asset 3. 230 kV D/C Kalpakkam PFBR-Kanchipuram transmission line and 2 numbers of 230 kV Bays at Kanchipuram Sub-station of TNEB	Powergrid	Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI)	SR	20469173		As per Regulation 13(3) of Sharing Regulations 2020
15	220 kV line bays at Madhugiri for termination of 220 kV D/C Madhugiri – Nittur line	Powergrid	Karnataka DISCOMS	SR	840822	Karnataka	As per Regulation 13(12) of Sharing Regulations 2020
16	04 No. 220 KV bays at 400/220kV Yelahanka Substation	Powergrid	Karnataka Power Transmission Corporation Limited (KPTCL)	SR	2710419	Karnataka	As per Regulation 13(12) of Sharing Regulations 2021
17	Thermal Powertech Corporation India Ltd Switchyard-Nellore PS 400kV D/c (quad)	Powergrid	Sembcorp Energy India Ltd Project-I	SR	113512		As per Regulation 13(9) of Sharing Regulations 2020
18	HVDC Mundra-Mahendergarh	Powergrid	Adani Power Limited	WR	285612071		--
19	2 nos. 220 kV line bays at Mapusa (Colvale) (Powergrid) Substation (for Mapusa- (Colvale) (Powergrid)-Tuem 220 kV D/C line)	Powergrid	Goa Electricity Department (GED), Goa	WR	1254778	Goa	As per Regulation 13(12) of Sharing Regulations 2020

Sl.No.	Name of the Asset	Transmission Licensee	Name of the beneficiary	Region	MTC in ₹	State Control Area in which the Bilateral charges are included	Remarks
20	Asset 3: 2 nos. 220 kV line bays at 400/220 kV Pirana substation	Powergrid	Gujarat Urja Vikas Nigam Limited (GUVNL)	WR	972041	Gujarat	As per Regulation 13(12) of Sharing Regulations 2021
21	400 kV Banaskantha (Radhanesda) Pooling Station-Banaskantha (PG) D/C line alongwith 2 nos. 400 kV line bays at Banaskanta (PG) under Tr. System for Ultra Mega Solar Power Park (700 MW) at Banaskantha (Radhanesda), Gujarat in WR	Powergrid	Gujarat Power Corporation Limited (GPCL)	WR		Gujarat	As per Regulation 13(3) of Sharing Regulations 2020
22	Est. of 2x500 MVA, 400/220 kV PS at Banaskantha (Radhanesda) (GIS) with 1x125 MVAR BR, 2 nos of 400 kV line bays at Bnsknta (Radhanesda) (GIS) for interconnection of Bnsknta (Radhanesda) PS-Bnsknta (PG) 400 kV D/C (twin AL59) TL & 4 Nos 220 kV Line bays	Powergrid	Gujarat Power Corporation Limited (GPCL)	WR	11577092	Gujarat	As per Regulation 13(3) of Sharing Regulations 2020
23	MBPMPPL TPS-Jabalpur PS 400 kV D/c (Triple) line	Powergrid	MB Power	WR	8993256		As per Regulation 13(9) of Sharing Regulations 2020
24	1 no. 220 kV line bays at 400/220 kV Indore substation	Powergrid	Madhya Pradesh Power Transmission Corporation Limited (MPPTCL)	WR	1235668	Madhya Pradesh	As per Regulation 13(12) of Sharing Regulations 2020
25	1 no. 220 kV line bay at 400/220 kV Indore substation						
26	2 nos. 220 kV Line bays (Bay No 209 & 211) at NP Kunta substation	Powergrid	AP Solar Power Corporation Pvt Ltd (APSPCL)	SR	1276471		As per Regulation 13(3) of Sharing Regulations 2020
27	LILO of one ckt of 132 kV Biswanath-Chariyalli (PG)-Itanagar at Gohpur(AEGCL)	NER-II Transmission Ltd	Assam Electricity Grid Corporation Limited (AEGCL)	NER	1016063.34	Assam	As per Regulation 13(12) of Sharing Regulations 2020
28	04 Nos. 220 kV bays at Dehradun Substation	Powergrid	Power Transmission Corporation Of Uttarakhand Limited	NR	2624468.49	Uttarakhand	As per Regulation 13(12) of Sharing Regulations 2020
29	YTC of NCC Power projects Ltd. -Nellore PS 400kV D/c (quad)	Powergrid	Sembcorp Energy India Ltd Project-2	SR	7007360.39		As per Regulation 13(9) of Sharing Regulations 2020
30	ICTs at 400/220 kV, 2x500 MVA Dhanbad sub-station	Powergrid	Jharkhand Urja Sancharan Nigam Limited (JUSNL)	ER	9036420.38	Jharkhand	As per Regulation 13(12) of Sharing Regulations 2020
31	Establishment of 4x500MVA, 400/220kV Jam Khambhaliya PS (GIS)	Jam Khambhaliya Transco Limited	Powerica Ltd.	WR	18913549.80		As per Regulation 13(12) of Sharing Regulations 2020
32	1x125MVAR, 420kV Bus reactor at Jam Khambhaliya PS along with reactor bay			WR		As per Regulation 13(12) of Sharing Regulations 2020	
33	Extension of Essar-Lakadia/ Bhachau 400kV D/c (triple snowbird) line upto Jam Khambhaliya PS			WR		As per Regulation 13(12) of Sharing Regulations 2020	
34	2 nos. of 400kV line bays at Jam Khambhaliya PS for termination of Jam Khambhaliya PS-Lakadia 400kV D/C (triple) line			WR		As per Regulation 13(12) of Sharing Regulations 2020	
35	63MVAR switchable Line Reactor at both ends of Lakadia - Jam Khambhaliya 400kV D/c line along with 500 Ohms NGR on both circuits & at both ends of Lakadia - Jam Khambhaliya 400 kV D/c line			WR		As per Regulation 13(12) of Sharing Regulations 2020	
36	Mahan Bilaspur Line	Essar Power Transmission Company Ltd.	Mahan Energen Limited (formerly Essar Power M.P. Ltd)	WR	62607664.92		As per CERC order dated 14.03.2022 in Petition No. 145/TT/2018 Along with IA No.89/IA/2018, IA No. 47/IA/2020 & IA No.75/IA/2021

Sl.No.	Name of the Asset	Transmission Licensee	Name of the beneficiary	Region	MTC in ₹	State Control Area in which the Bilateral charges are included	Remarks
37	2 numbers 400 kV line bays at Bhadla (POWERGRID) Sub-station	Powergrid	Adani Renewable Energy Park Rajasthan Limited	NR	2009267.00		As per Regulation 13(3) of Sharing Regulations 2020
38	Establishment of 400 kV Pooling Station at Fatehgarh	Fatehgarh Badhla Transmission Limited	Adani Renewable Energy Park Rajasthan Limited	NR	1226281.00		As per Regulation 13(3) of Sharing Regulations 2020
39	Fatehgarh Pooling Station – Bhadla (PG) 765 kV D/C line (To be operated at 400 kV)		ACME Solar Holdings Pvt. Ltd	NR	1954752.00		As per Regulation 13(3) of Sharing Regulations 2020
40	2 Nos. 400 kV line bays at Fatehgarh Pooling Station			NR			As per Regulation 13(3) of Sharing Regulations 2020
41	1x25 MVAR Bus Reactor at 400 kV Fatehgarh Pooling Station along with associated bay			NR			As per Regulation 13(3) of Sharing Regulations 2020
42	Space for future 220kV (12 Nos) Line Bays			NR			As per Regulation 13(3) of Sharing Regulations 2020
43	Space for future 400kV (8 Nos) Line Bays alongwith line reactors at Fatehgarh Pooling Station			NR			As per Regulation 13(3) of Sharing Regulations 2020
44	Space for future 220/400kV transformers (5 Nos) alongwith associated transformer bays at each level.			NR			As per Regulation 13(3) of Sharing Regulations 2020
45	Space for future 400kV bus reactors (2 Nos) alongwith associated bays.			NR			As per Regulation 13(3) of Sharing Regulations 2020
46	400KV, 500 MVA ICT-II along with associated bays at Bhadla (POWERGRID) Substation;	Powergrid	EsseL Saurya Urja Company of Rajasthan Limited (ESUCRL)	NR	4564995.83		As per Regulation 13(3) of Sharing Regulations 2020
47	500 MVA ICT-III along with associated bays at Bhadla (POWERGRID) Substation,			NR			As per Regulation 13(3) of Sharing Regulations 2020
48	500 MVA ICT-I along with associated bays at Bhadla (POWERGRID) Substation			NR			As per Regulation 13(3) of Sharing Regulations 2020
<b>TOTAL</b>					<b>538983702</b>		

**Annexure-VIII****Commercial data related to LTA details of exempted Renewable Energy (RE) based generation (Cumulative till Jul'22)**

S.No	Name of the LTA customer (RE Injecting utility)	Region	Quantum of LTA Granted/ MTOA operationalised	LTA/MTOA with tied up beneficiaries	Name of the beneficiaries (for entire LTA granted)	Effective date of LTA/MTOA operationlization	Exempted quantum in MW (as on Jul'22)	Remarks	PS	SPD/SPV/Subsidiary
1	Rewa Ultra Mega Solar Power Development	WR	750	750	MP-651 MW, DMRC-99 MW	490MW:07.07.18; 260 MW: 13.04.19	750	No billing for Sep'22 billing month.	Rewa	
2	Ostro Kutch Wind Private Limited	WR	300	300	GRIDCO-50 MW, Jharkhand-50 MW, Bihar-50 MW, UPPCL-150MW	126MW: 24.08.18; 50MW: 02.11.18; 50MW: 29.12.18; 24MW: 30.03.19; 50MW: 14.04.19	296.2	Included in Format II G (3).	Bhachau	
3	Inox Wind Infrastructure Services Limited	WR	500	500	Bihar -50 MW, Jharkhand -50 MW, UP - 200 MW, BRPL - 50 MW, Haryana - 150 MW	500MW: 14.04.2019	210	Bills are being raised for mismatch period. 10MW COD w.e.f 04.09.2021.	Bhuj PS	
4	ReNew Power Limited	WR	300	300	UP - 100 MW, PSPCL - 100 MW, GRIDCO - 50 MW, GOA - 50 MW	300MW: 01.05.19	230.1	Included in Format II G (3)		
5	ReNew Power Limited	WR	50	50	UHBVN & DHBVN - 50MW	50MW: 23.11.19	0	Included in Format II G (3)		
6	Green Infra Wind Energy Ltd.	WR	250	250	Assam (APDCL) - 50 MW, GRIDCO Ltd.-100 MW, Jharkhand (JBVNL)- 100 MW	151.2MW:14.04.19; 98.8 MW: 04.11.19	250	No billing for Sep'22 billing month. Billing for prior mismatch period corresponding to 98.8 MW will be raised upon receipt of approved CERC tariff order for ATS.		
7	Green Infra Wind Energy Ltd.	WR	300	300	PSPCL -200 MW, Bihar DISCOMs: 100 MW (NBPDC & SBPDCL)	300 MW: 04.11.19	300	No billing for Sep'22 billing month. Billing for prior mismatch period will be raised upon receipt of approved CERC tariff order for ATS.		
8	Adani Green Energy MP Ltd. (AGEMPL Dayapar)	WR	100	100	UPPCL - 40 MW , NPCL - 10 MW, PSPCL - 50 MW	100 MW: 04.11.19	100	No billing for Sep'22 billing month. Billing for prior mismatch period will be raised upon receipt of approved CERC tariff order for ATS.		
9	SEI Sunshine	WR	180	180	TPDDL-180 MW	90 MW:18.11.19; 90 MW: 01.04.20	180	No Billing for Sep'22 billing month		
10	Alfanar Energy Pvt. Limited	WR	300	300	BRPL -150 MW, BYPL -50 MW, TPDDL - 50 MW, Bihar - 50 MW	100MW: 31.01.20; 50MW: 15.02.20; 50MW: 28.02.20; 36MW: 06.10.20; 36MW: 20.10.20; 28MW: 10.02.21	300	No billing for Sep'22 billing month. Billing for prior mismatch period will be raised upon receipt of approved CERC tariff order for ATS. Already included in Format II G(2).		
11	ReNew Wind Energy (AP2) Private Limited (2 separate LTA grants, 1 to Haryana & 2nd to GRIDCO)	WR	262.5	262.5	Haryana	50 MW:25.02.20; 100 MW: 20.09.20; 20: 03.12.20; 40: 10.12.20; 43.75: 20.12.20 4.375: 27.01.21 4.375: 19.02.21	262.5	No billing for Sep'22 billing month. Billing for prior mismatch period will be raised upon receipt of approved CERC tariff order for ATS. Included in Format II G(2).	Bhuj	

S.No	Name of the LTA customer (RE Injecting utility)	Region	Quantum of LTA Granted/ MTOA operationalised	LTA/MTOA with tied up beneficiaries	Name of the beneficiaries (for entire LTA granted)	Effective date of LTA/MTOA operationization	Exempted quantum in MW (as on Jul'22)	Remarks	PS	SPD/SPV/Subsidiary
			37.5	37.5	GRIDCO	30: 10.12.2020 6.25: 20.12.2020 0.625: 27.01.21 0.625: 19.02.21	37.5	LTA operationalized on existing margin. No billing for Sep'22 Billing month. Included in Format II G(2).		
12	Mytrah Energy (India) Pvt Ltd (GEC-I Corridor)	SR	250	250	UPPCL -100 MW, Jharkhand -50 MW, Bihar - 50 MW, Assam - 50 MW	75MW: 10.06.18; 50MW: 30.09.18; 125MW: 01.12.18;	250	No billing for Sep'22 billing month.		
13	AP Solar Power Corporation Pvt Ltd (NP Kunta)	SR	1500	1500	Andhra Pradesh-1500MW	250MW: 11.07.16; 750MW: 04.08.18; 500MW: 01.10.18;	1400	Included in Format II G (1)		
14	Karnataka Solar Power development Corporation Ltd	SR	2050	2050	Karnataka-1850 MW, UPPCL-200 MW	600MW: 12.07.18; 400MW: 28.09.18; 200MW: 30.12.19; 850 MW: 03.05.20	2050	No billing for Sep'22 billing month.		
15	Green Infra Renewable Energy Ltd.	SR	249.9	249.9	UPPCL -99.9 MW, Jharkhand -50 MW, Bihar - 50 MW, BRPL - 50 MW	249.9 MW: 10.10.18	249.9	No delay. Hence, no billing.		
16	Orange Sironj Power Pvt. Ltd.	SR	200	200	Bihar - 100 MW, Haryana - 100 MW	200 MW: 22.02.19	200	No billing for Sep'22 billing month.		
17	Betam Wind Energy Private Limited	SR	250.2	250.2	Bihar - 50.2 MW, Odisha-100 MW, UPPCL -100 MW	250.2 MW:31.07.19	218.2	LTA was granted on existing margins. However, CERC in tariff petition 172/TT/2018 has linked the LTA to 2X500MVA, 400/230KV ICTs at Tirunelveli Pool (Tuticorin-II). Therefore, Betam is not included in FORMAT II-G(3).		
18	Saurya Urja Company of Rajasthan Limited	NR	500	500	UPPCL-500 MW	500 MW: 27.10.19	500	No billing for Sep'22 billing month.	Bhadla	Clan Solar Power (Bhadla) Pvt. Ltd. : 300MW SB Energy Four Pvt. Ltd.: 200MW
19	Adani Renewable Energy Park Rajasthan Ltd.	NR	250	250	UPPCL-250 MW	250 MW: 27.10.19	250	No delay. Hence, no billing.	Bhadla	Azure Power India Pvt. Ltd.: 200MW ReNew Solar Power Pvt. Ltd.:50MW
20	NTPC Ltd. (Auraiya Solar)	NR	20	20	UPPCL-20MW	15MW: 25.10.2020 5MW: 30.11.2020	20	No billing for Sep'22 billing month.	Auraiya	
21	Sprng Renewable Energy Pvt Limited	SR	300	300	UP-300 MW	300 MW: 30.11.19	300	No billing for Sep'22 billing month.		
22	Adani Wind Energy Kutchh Three Limited	WR	250	250	Chandigarh Administration, UT, Chandigarh 40MW Uttar Pradesh Power Corporation Ltd 85MW Kerala State Electricity Board Ltd 75MW GRIDCO LTD. 50MW	115 MW: 05.02.2021 30.5 MW: 15.03.2021 43.8 MW: 08.04.2021 28.5 MW: 05.05.2021 32.2 MW: 09.05.2021	250	No Billing for Sep'22 billing month. Included in Format II G(2).	Bhuj	
23	Continuum Power Trading (TN) Pvt. Ltd	WR	50	50	MPPMCL	15.02.2021	50	32MW RE Capacity commissioned wef 12/4/21 18MW RE Capacity commissioned wef 22/4/21 No Billing for Sep'22 billing month. Included in Format II G(2).	Bhuj	
24	Avikiran Solar India Private Ltd.. (ASIPL)	WR	285	285	MSEDCL-100MW MPPMCL-185MW	09.05.2021	126	LTA made effective vide letter dated 07.05.2021 upon commissioning of identified transmission system (Bhuj ICT Augmentation scheme) but generation is delayed. Bills will be raised for mismatch period upon receipt of approved CERC tariff order for ATS. COD of 16.8 MW: 24.02.2022; 25.2MW: 04.03.2022; 35.7MW: 06.03.2022; 21MW:11.03.2022; 12.60MW: 19.04.22; 14.70MW: 22.04.22	Bhuj	

S.No	Name of the LTA customer (RE Injecting utility)	Region	Quantum of LTA Granted/ MTOA operationalised	LTA/MTOA with tied up beneficiaries	Name of the beneficiaries (for entire LTA granted)	Effective date of LTA/MTOA operationization	Exempted quantum in MW (as on Jul'22)	Remarks	PS	SPD/SPV/Subsidiary
25	Essel Surya Urja Company of Rajasthan Ltd.	NR	750	750	PSPCL-300MW NBPDC-207MW SBPDCL-243MW	01.06.2021	300	Included in Format II G (1).	Bhadla	SB Energy Six Pvt. Ltd.:600MW SB Energy Sixteen Projects Ltd.: 150MW
26	Adani Green Energy (MP) Limited	WR	75	75	MSEDCL	01.07.2021	75	MTOA was operational upto 30-Jun-2021. Now, The corresponding LTA has been operationalised w.e.f. 01.07.2021 (indicated along side) and waiver documents also submitted. Included in Format II G(2).		
27	Adani Renewable Energy Park Rajasthan Ltd.	NR	1000	996	TSSPDCL-208.82MW TSNPDC-87.18MW AEML-700MW	01.08.2021	247.20	LTA made effective vide CTU letter dated 31.07.2021 but generation is delayed. 1000MW is on Target (NR) till 11.08.2021. After 11.08.2021, 704MW is on Target (NR) and 296MW is on Firm (SR). After 21.12.2021, 4MW is on Target, 700 MW Firm (WR) and 296 MW Firm (SR). COD of 49.92 MW: 30.12.21 & COD of 74.88MW: 05.02.2022, 74.88MW: 05.03.2022, 47.52MW: 19.06.2022	Fatehgarh	NTPC Ltd.:296MW Adani Hybrid Energy Jaisalmer Four Ltd.: 700MW
28	Gujarat Power Corporation Limited	WR	700	600	GUVNL:600MW WR TARGET:100MW	12.08.2021	485	Included in Format II G (1)	Radhanesda	
29	Azure Power India Pvt. Ltd.	NR	130	130	MSEDCL	01.09.2021	130	No Billing for Sep'22 billing month	Bhadla	Azure Power Thirty Four Pvt. Ltd.
30	Tata Power Renewable Energy Ltd.	NR	150	150	MSEDCL	01.09.2021	150	No Billing for Sep'22 billing month	Bhadla	Tata Power Renewable Energy Ltd.
31	Azure Power India Pvt. Ltd.	NR	300	300	GRIDCO: 200MW BRPL: 100MW	01.09.2021	300	LTA was made effective vide CTU letter dated 26.08.2021. 50MW w.e.f. 13.10.2021, 50MW COD w.e.f. 02.11.2021 and 50MW COD w.e.f. 30.11.2021, 50MW COD w.e.f. 27.12.2021, 50MW COD w.e.f. 31.01.2022, 50MW: 07.03.2022. Bills will be raised for mismatch period upon receipt of approved CERC tariff order for ATS.	Bhadla	Azure Power Forty One Pvt. Ltd.
32	Azure Power India Pvt. Ltd.	NR	200	200	MPPMCL	01.09.2021	200	COD of 53MW: 14.02.2022, COD of 147MW: 30.03.2022 Bills will be raised for mismatch period upon receipt of approved CERC tariff order for ATS.	Bhadla	Azure Power Maple Pvt. Ltd.
33	Azure Power India Pvt. Ltd.	NR	50	50	MPPMCL	01.09.2021	50	COD of 50MW: 30.03.2022. Bills will be raised for mismatch period upon receipt of approved CERC tariff order for ATS.	Bhadla	Azure Power Maple Pvt. Ltd.
34	Renew Power Pvt Ltd	SR	300	300	SBPDCL: 162 MW NBPDC: 138 MW	63 MW: 24.09.21 10.5 MW: 11.10.21 12.6 MW: 19.10.21 14.7 MW: 26.10.21 16.8 MW: 11.11.21 10.5 MW: 23.11.21 10.5 MW: 30.11.21 35.7 MW: 27.07.22 <b>Total : 174.3 MW</b>	174.3	Part LTA operationalized on existing margins as per the request of applicant. Included in Format II G(3). 63 MW: 25.09.21 10.5MW: 12.10.21 10.5MW: 20.10.21 16.8MW: 27.10.21 14.7MW: 13.11.21 10.5MW: 01.12.21 10.5MW: 18.12.21 37.8MW: 27.07.2022.		
35	SBSR Power Cleantech Eleven Pvt. Ltd.	NR	300	300	TPDDL-200MW BYPL-100MW	20.11.2021	150	50MW: 15.08.2021; 50MW: 04.04.2022; 50MW: 11.04.2022. Bills will be raised for mismatch period upon receipt of approved CERC tariff order for ATS.	Bikaner	SBSR Power Cleantech Eleven Pvt. Ltd.
36	Azure Power India Pvt. Ltd.	NR	300	300	HPPC-100MW JBVNL-200MW	100MW: 25.09.2021 200MW: 20.11.2021	300	LTA Application: 1200001655. 100MW LTA operationalized on part system and was earlier included in Format II G (2). Balance LTA operationalized vide CTU letter dated 18.11.2021. 300MW Commissioned. No billing for Sep'22 billing month.	Bikaner	Azure Power Forty Three Pvt. Ltd.
37	Avaada Energy Pvt. Ltd.	NR	100 MW out of 350MW	350.0	MSEDCL-350MW	100MW: 03.11.2021	100.0	100MW COD w.e.f. 03.11.2021	Bikaner	Avaada Sunce Energy Pvt. Ltd.
38	Ayana Renewable Power One Pvt. Ltd.	NR	300.0	300.0	MPPMCL-300MW	300MW: 23.12.2021	300.0	300MW COD: 22.12.2021	Bikaner	Ayana Renewable Power One Pvt. Ltd.
39	Avaada Energy Pvt. Ltd.	NR	50 MW out of 350MW	-	MSEDCL-350MW	50MW:07.01.2022	50.0	Additional 50MW 50MW COD w.e.f. 07.01.2022	Bikaner	Avaada Sunce Energy Pvt. Ltd.
40	Avaada Energy Pvt. Ltd.	NR	100 MW out of 300MW	300.0	TSSPDCL-98.77 TSNPDC-41.23MW, TANGEDCO-160MW	100MW:18.01.2022	100.0	100MW COD w.e.f. 14.01.2022	Bikaner	Avaada Sustainable RJProject Pvt. Ltd.



S.No	Name of the LTA customer (RE Injecting utility)	Region	Quantum of LTA Granted/ MTOA operationalised	LTA/MTOA with tied up beneficiaries	Name of the beneficiaries (for entire LTA granted)	Effective date of LTA/MTOA operationization	Exempted quantum in MW (as on Jul'22)	Remarks	PS	SPD/SPV/Subsidiary
41	Adani Renewable Energy (Rajasthan) Ltd. (erstwhile Mahoba Solar (UP) Pvt. Ltd.)	NR	200.0	200.0	MSEDCL-200MW	200MW; 05.01.2022	200.0	200MW COD w.e.f. 21.08.2019	Bhadla	Adani Renewable Energy (Rajasthan) Ltd.
42	Avaada Energy Pvt. Ltd.	NR	50 MW out of 350MW	-	MSEDCL-350MW	50MW:04.02.2022	50.0	Additional 50MW 50MW COD w.e.f. 04.02.2022	Bikaner	Avaada Sunce Energy Pvt. Ltd.
43	Avaada Energy Pvt. Ltd.	NR	150 MW out of 350MW	-	MSEDCL-350MW	150MW:25.02.2022	150.0	Additional 50MW 50MW COD w.e.f. 25.02.2022, 50MW: 17.03.2022; 50MW: 08.04.2022. No Billing for Sep'22 billing month	Bikaner	Avaada Sunce Energy Pvt. Ltd.
44	Avaada Energy Pvt. Ltd.	NR	40 MW out of 300MW	-	TSSPDCL-98.77 TSNPDCCL-41.23MW, TANGEDCO-160MW	40MW:08.02.2022	40.0	40MW COD w.e.f. 08.02.2022	Bikaner	Avaada Sustaianble RJProject Pvt. Ltd.
45	Avaada Energy Pvt. Ltd. (MTOA)	NR	240.0	240.0	UHBVNL & DHBVNL, Haryana	240 MW: 01.02.2022	240.00	112.95 MW COD w.e.f. 26.12.2021 ; 12.80 MW COD w.e.f 01.02.2022; 19.2MW: 16.03.2022; 6.4MW: 07.04.2022; 88.65MW:11.05.2022	Bikaner	Avaada RJHN Pvt. Ltd.
46	Masaya Solar Energy Private Ltd	WR	300.0	300.0	TSSPDCL: 91.715MW TSNPDCCL: 38.285MW TANGEDCO: 170MW	300MW: 25.03.2022	0.00	Included in Format II G (3)	Khandwa (PG)	
47	GRT Jewellers (India) Pvt Ltd	SR	150	150	SBPDCL: 81 MW NBPDCCL: 69 MW	150 MW: 23.03.2022	150	Entire LTA of 150 MW was operationalized vide CTU letter dated 21.03.2022. 50 MW: 30.03.2022 (COD) 50 MW: 13.04.2022 (COD) 50 MW: 17.06.2022 (COD). Included in Format II G (3)		
48	ACME Solar Holdings Pvt. Ltd.	NR	300	300	BRPL: 300MW	02.04.2022	0	Included in Format II G (1).	Fatehgarh	ACME Raisar Solar Energy Pvt Ltd
49	ACME Solar Holdings Pvt. Ltd.	NR	300	300	BRPL:100MW BYPL:100MW TPDDL:100MW	02.04.2022	0	Included in Format II G (1).	Fatehgarh	ACME Phalodi Solar Energy Pvt Ltd
50	ACME Solar Holdings Pvt. Ltd.	NR	300	300	HPPC (NR)	02.04.2022	0	Included in Format II G (1).	Fatehgarh	ACME Deoghar Solar Energy Pvt Ltd
51	ACME Solar Holdings Pvt. Ltd.	NR	200 out of 300	300	HPPC: 100MW NBPDCCL: 69MW SBPDCL: 81MW Puduchery: 50MW	02.04.2022	0	Included in Format II G (1).	Fatehgarh	ACME Dhaulpur Solar Energy Pvt Ltd
52	Avaada Energy Pvt. Ltd.	NR	160 out of 300	-	TSSPDCL-98.77 TSNPDCCL-41.23MW, TANGEDCO-160MW	60MW: 13.04.2022 100MW: 23.04.2022	160	10MW COD w.e.f. 08.02.2022, 50MW COD w.e.f. 13.04.2022, 100MW: 11.05.2022. Included in Format II G (3)	Bikaner	Avaada Sustaianble RJProject Pvt. Ltd.
53	NTPC LTD. (Auraiya Floating Solar)	NR	20	20	UPPCL:20MW	11.04.2022	0	Included in Format II G (3)	Auraiya GPS	NTPC Ltd.
54	Southern Power Distribution Company of Telangana Limited (TSSPDCL)	WR	39.5	39.5	TSSPDCL	14.11MW:27.05.2022 10.58MW:31.05.2022 14.81MW:24.06.2022	24.69	COD of 14.11 MW; 14.05.22; 10.58MW: 15.06.22; Included in Format II G (3)	56MW Solar Power Plant within the premises of NTPC Kawas, Gujarat	
55	Northern Power Distribution Company of Telangana Limited (TSNPDCCL)	WR	16.5	16.5	TSNPDCCL	5.89MW:27.05.2022 4.42MW:31.05.2022 6.19MW:24.06.2022	10.31	COD of 5.89MW; 14.05.2022;4.42MW: 15.06.22 Included in Format II G (3)	56MW Solar Power Plant within the premises of NTPC Kawas, Gujarat	
56	POWERICA Ltd.	WR	50.6	50.6	UPPCL	24.3MW: 07.05.2022	24.3	Bilateral billing on behalf of Jamkhamabliya Transco Limited is being done as per RTA. COD of 24.3MW: 03.06.2022	Jam khambhaliya PS	
57	SBESS Services Projectco Two Pvt Ltd	WR	324.4	324.4	UPPCL	26.05.2022	0	Bills will be raised for mismatch period upon receipt of approved CERC tariff order for ATS.	Indore S/s	
58	Southern Power Distribution Company of Telangana Limited (TSSPDCL)	WR	14.11	14.11	TSSPDCL	09.05.2022	0	Included in Format II G (3)	20MW Solar Power Plant within the premises of NTPC Gandhar, Gujarat	
59	Northern Power Distribution Company of Telangana Limited (TSNPDCCL)	WR	5.89	5.89	TSNPDCCL	09.05.2022	0	Included in Format II G (3)	20MW Solar Power Plant within the premises of NTPC Gandhar, Gujarat	

S.No	Name of the LTA customer (RE Injecting utility)	Region	Quantum of LTA Granted/ MTOA operationalised	LTA/MTOA with tied up beneficiaries	Name of the beneficiaries (for entire LTA granted)	Effective date of LTA/MTOA operartionlization	Exempted quantum in MW (as on Jul'22)	Remarks	PS	SPD/SPV/Subsidiary
60	ACME Solar Holdings Pvt. Ltd.	NR	100 out of 300	-	HPPC: 100MW NBPDC: 69MW SBPDCL: 81MW Puduchery: 50MW	11.05.2022	0	Included in Format II G (1).	Fatehgarh	ACME Dhaulpur Solar Energy Pvt Ltd
61	Adani Renewable Energy Holding One Ltd.	NR	390	390	HPPC-390MW	11.05.2022	390	50MW: 17.08.21; 52.19MW: 12.04.22; 92.81MW: 27.05.22; 50MW: 14.08.21; 143.64MW: 27.05.22; 1.36MW: 28.05.22; Bills will be raised for mismatch period upon receipt of approved CERC tariff order for ATS.	Fatehgarh-II PS	Adani Green Energy Eighteen Ltd.
62	ReNew Solar Energy (Jharkhand Three) Pvt. Ltd.	NR	300.0	300.0	MPPMCL-300MW	11.05.2022	300.0	150MW: 02.09.2021, 50MW: 27.09.2021, 50MW: 05.10.2021, 50MW: 09.12.2021	Fatehgarh-II PS	ReNew Solar Energy (Jharkhand Three) Pvt. Ltd.
63	ReNew Solar Urja Pvt. Ltd.	NR	300.0	300.0	TSSPDCL: 91.715MW TSNPDC: 38.285MW TANGEDCO: 170MW	11.05.2022	300.0	150MW: 02.12.2021, 50MW: 07.12.2021, 50MW: 13.12.2021, 50MW: 16.12.2021	Fatehgarh-II PS	ReNew Solar Urja Pvt. Ltd.
64	Mahindra Susten Pvt. Ltd.	NR	250.0	250.0	HPPC-250MW	29.06.2022	250.0	175MW: 20.05.2022, 75MW: 17.06.2022. No delay. Hence, no billing.	Bhadla-II PS	Mega Surya Urja Pvt. Ltd.
	<b>Total</b>		<b>18491.1</b>	<b>18387.1</b>			<b>14181.2</b>			

\*Waiver Documents not submitted to CTU

Note: List does not include solar projects of NTPC / NVVNL / SECI which were granted LTA long back and are already operational

**Methodology for computation of Transmission Deviation of the states for special cases:***(As decided in 51<sup>st</sup> Meeting of Commercial Sub-Committee held on 22.04.2022)***1. When CGS/ISGS is connected to both ISTS & STU system and LTA to the state is exempted/ excluded: (Cases are:**

- i. NNTPP - TANTRANSCO system,
- ii. NTPC, Ramagundam Stage I & II – TSTRANSCO system,
- iii. NLC TPS II Stage I - TANTRANSCO system

$$\text{Transmission Deviation of state in a Time Block} = \frac{\text{Actual Drawal in a Time Block as furnished by SRLDC} - [LTA^{\$} + MTOA + X]}{\text{Actual Drawal in a Time Block as furnished by SRLDC}}$$

Where,

- X-** Net drawal through identified STU interface nodes connected to respective CGS in a time block or the weighted average allocation (MW) of the State from the respective CGS for the respective month, whichever is less.

For NNTPP,

- X-** Net drawal through identified STU interface nodes connected to respective CGS in a time block or 560.835 MW (Ex bus of the station excluding Mines % allocation & LTA granted by CTU), whichever is less.

**2. When CGS/ISGS is connected to only STU network and LTA to the state is exempted:(Cases are:**

- i. NTPC Simhadri STPS Stage I - APTRANSCO system,
- ii. MAPS - TANTRANSCO system

$$\text{Transmission Deviation of state in a Time Block} = \frac{\text{Actual Drawal in a Time Block as furnished by SRLDC} - [LTA^{\$} + MTOA + \{(Y \times Z)/100\}]}{\text{Actual Drawal in a Time Block as furnished by SRLDC}}$$

Where,

**Y - Injection/drawal of respective CGS in a time block.****Z - Weighted Average Percentage Allocation of the state from the respective CGS for the respective month as published in REA (Item 2).**

- **Weighted Average Percentage Allocation (MoP) of the respective state from CGS/IGS, if CGS/ISGS is not in ABT mechanism.**

<sup>\$</sup>LTA of the state includes the LTA exempted for Renewable Energy Generation of respective state as furnished by Implementing Agency (IA).

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पावर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड  
(भारत सरकार का उद्यम)  
**POWER SYSTEM OPERATION CORPORATION LIMITED**  
(A Government of India Enterprise)



CIN NO : U40105DL2009GOH188682

दक्षिण क्षेत्रीय भार प्रेषण केन्द्र, 29, रेस कोर्स क्रॉस रोड, बेंगलूर 560 009.

दूरभाष : कार्यालय : 080-2225 0047, 2235 2850, 2225 4525, 2225 1169, 2225 5962 फैक्स : 080 2226 8725, 2225 9219

Southern Regional Load Despatch Centre, 29 Race Course Cross Road, Bangalore 560 009.

Tel : Off : 080- 2225 0047, 2235 2850, 2225 4525, 2225 1169, 2225 5962, Fax : 080 2226 8725, 2225 9219 www.srdc.org / www. posoco.in

**BILL OF SUPPLY FOR THE MONTH OF : October, 2022**

Bill No: SR/2022-23/0551

Date of Issue : 02-11-2022

Category of User : Distribution Licensee  
Name of the user : Transmission Corporation of Telangana Limited  
Address : Telangana State Power Coordination Committee  
4th Floor, Vidyuth Soudha, Khairatabad,  
Hyderabad, Telangana  
500082  
Registration No : SRRTS1DS

SI No	Description	Amount(₹)
SRLDC Fees and Charges		
1	RLDC Charges as per Annexure I	28,35,088
Rupees Twenty Eight Lakh Thirty Five Thousand Eighty Eight Only.		

- The bill has been raised as per Hon'ble CERC order 378/MP/2019 dt 31-05-2021
- Rebate and late payment surcharge shall be allowed as per relevant provisions of the Fees and Charges Regulations 2019.
  - A rebate of 1.5% shall be allowed for payments made within 5 days from the date of billing.
  - A rebate of 1% shall be allowed for payments made within 30 days from the date of billing.
  - A surcharge of 1.5% per month shall be levied for payments made after 45 days from date of billing.
- After making payment, details of the payment may please be entered in SRLDC fees & charges portal.
- Bank and Tax details of SRLDC, POSOCO have been given below.

**1st Bank Account Details:**

Account Name: POSOCO-RLDC Fees and Charges Account  
Bank Name: STATE BANK OF INDIA  
Account Number: 40232781809  
RTGS / IFS Code: SBIN0004688

**2nd Bank Account Details:**

Account Name: POSOCO-RLDC Fees and Charges Account  
Bank Name: ICICI BANK LTD  
Account Number: 000705051613  
RTGS / IFS Code: ICIC0000007  
POSOCO Pan No: AAFCP2086B  
POSOCO Tan No: BLRP11902C  
SRLDC GSTIN: 29AAFCP2086B1ZI  
SAC: 312ASFF

भवदीय,  
For & On Behalf Of  
पावर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड  
Power System Operation Corporation Limited

*(Signature)*

(C Rethi Nair)

General Manager (Market Operation)  
Southern Regional Load Despatch Centre

**SUMMARY WORKSHEET - BILL FOR THE MONTH OF OCTOBER'22 IN RESPECT OF STATE SECTOR ULDC ASSETS**

Sl.no	PARTICULARS	REMARKS	AP & TS Transco	KARNATAKA	KSEB	TNEB	PONDICHERRY	TOTAL
1	State sector fibre optic communication system (KSEB - DOCO: 01.02.2013 & AP & TS TRANSCO- DOCO: 01.02.2013) in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave links in Southern Region as per CERC order dtd.22.02.2019	as per WS- 1	3,61,354		5,21,146			8,82,500
2	State sector fibre optic communication system (AP & TS TRANSCO- DOCO: 01.04.2013) in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave links in Southern Region as per CERC order dtd.22.02.2019.	as per WS- 2	666833					6,66,833
3	State sector fibre optic communication system (KSEBL- DOCO: 01.01.2014) in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave links in Southern Region as per CERC order dtd.22.02.2019	as per WS- 3			150167			1,50,167
4	State sector fibre optic communication system ((Asset- I - AP & TS TRANSCO- DOCO: 01.06.2015) under Fiber Optic Communication system in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave links in Southern Region as per CERC order dtd.29.07.2016	as per WS- 4	80250					80,250
5	State sector fibre optic communication system ((Asset- II- KSEBL- DOCO: 01.06.2015) under Fiber Optic Communication system in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave links in Southern Region as per CERC order dtd.29.07.2016	as per WS- 5			4833			4,833
<b>Total</b>			<b>11,08,438</b>	<b>0</b>	<b>6,76,146</b>	<b>0</b>	<b>0</b>	<b>17,84,583</b>

*जेरी*

**रश्मि मोहरना/Rashmi Moharana**  
 प्रबंधक(वाणिज्य)/Manager (Commercial)  
 दक्षिण प-II क्षेत्रीय मुख्यालय/POWERGRID, SRTS-II, RHQ  
 भारत सरकार का उद्यम/A Government of India Enterprise  
 सिंगापूरकहाली/Singaporekahalli,  
 केनरका रोड/केनरका रोड, बंगलोर-562 064

**Bill for the month of OCTOBER'22 in respect of State sector fibre optic communication system (KSEB - DOCO: 01.02.2013 & AP & TS TRANSCO- DOCO: 01.02.2013) in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave links in Southern Region as per CERC order dtd.22.02.2019**

(Amount in Rs.)

Year	Combined Tariff for (KSEB) & (AP & TS TRANSCO)
2022-23*	10590000

\*Note: These charges are being billed provisionally for the 2019-24 block in accordance with Regulation 10, clause (4) of CERC (Terms & conditions of tariff) Regulations, 2019 and are subject to adjustments as and when CERC issues revised tariff order.

**Apportionment of total state sector annual charges between the states:**

Note: Apportionment is done on the basis of : [ (total annual state sector charges) x (concerend state sector capital cost / total capital cost of state sector) ]

(Rs. In Lakh)

Customer	Capital cost as on COD as per CERC in respect of State sector (Rs.in Lakhs)
KSEB (ASSET- I)	351.45
AP & TSTRANSCO (ASSET- II)	243.69
TOTAL	595.14

**Apportionment of combined state sector tariff based on the capital cost:**

(Amount in Rs.)

Customer	( F.Y. 2022-23)	Tariff for the month of OCTOBER'22 (tariff p.a. /12)
KSEB (ASSET- I)	62,53,748	5,21,146
AP & TSTRANSCO (ASSET- II)	43,36,252	3,61,354
TOTAL	1,05,90,000	8,82,500

  
**रश्मि मोहराना/Rashmi Moharana**  
 प्रबंधक(वाणिज्य)/Manager (Commercial)  
 दक्षिण प-॥ क्षेत्रीय मुख्यालय/POWERGRID, SRTS-II, RHQ  
 भारत सरकार का उद्यम/A Government of India Enterprise  
 सिंगनायकनहल्ली/Singanayakanahalli,  
 येलहंका हॉबली, बंगलूरु/ Yelahanka Hobli, Bangalore-560 064

Bill for the month of OCTOBER'22 in respect of State sector fibre optic communication system (AP & TS TRANSCO- DOCO: 01.04.2013) in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave links in Southern Region as per CERC order dtd.22.02.2019.

(Amount in Rs.)

Year	Tariff for (AP & TS TRANSCO)	Tariff for the month of OCTOBER'22 (tariff p.a. /12)
2022-23*	8002000	666833

\*Note: These charges are being billed provisionally for the 2019-24 block in accordance with Regulation 10, clause (4) of CERC (Terms & conditions of tariff) Regulations, 2019 and are subject to adjustments as and when CERC issues revised tariff order.

**रश्मि मोहराना/Rashmi Moharana**  
 प्रबंधक(वाणिज्य)/Manager (Commercial)  
 दक्षिण प-॥ क्षेत्रीय मुख्यालय/POWERGRID, SRTS-II, RHQ  
 भारत सरकार का उद्यम/A Government of India Enterprise  
 सिंगनायकनहल्ली/Singanayakanahalli,  
 येल्हंका होबली, बेंगलूर/ Yelahanka Hobli, Bangalore-560 064

Bill for the month of OCTOBER'22 in respect of State sector fibre optic communication system (KSEBL- DOCO: 01.01.2014) in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave links in Southern Region as per CERC order dtd.22.02.2019

(Amount in Rs.)

Year	Tariff (KSEBL)	Tariff for the month of OCTOBER'22 (tariff p.a. /12)
2022-23*	1802000	150167

\*Note: These charges are being billed provisionally for the 2019-24 block in accordance with Regulation 10, clause (4) of CERC (Terms & conditions of tariff) Regulations, 2019 and are subject to adjustments as and when CERC issues revised tariff order.

**रश्मि मोहराना/Rashmi Moharana**  
 प्रबंधक(वाणिज्य)/Manager (Commercial)  
 दक्षिण प-II क्षेत्रीय मुख्यालय/POWERGRID, SRTS-II, RHQ  
 भारत सरकार का उद्यम/A Government of India Enterprise  
 सिंगनायकनहल्ली/Singanyakanahalli,  
 येलाहंका हॉबली, बेंगलूर/ Yelahanka Hobli, Bangalore-560 064



State sector fibre optic communication system (AP & TS TRANSCO- DOCO: 01.06.2015) under Fiber Optic Communication system in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave links in Southern Region as per CERC order dtd.29.07.2016

(Amount in Rs.)

Year	Tariff for (AP & TS TRANSCO)	Tariff for the month of OCTOBER'22 (tariff p.a. /12)
2022-23*	963000	80250

\*Note: These charges are being billed provisionally for the 2019-24 block in accordance with Regulation 10, clause (4) of CERC (Terms & conditions of tariff) Regulations, 2019 and are subject to adjustments as and when CERC issues revised tariff order.



**रश्मि मोहराना/Rashmi Moharana**  
 प्रबंधक(वाणिज्य)/Manager (Commercial)  
 दक्षिण प-II क्षेत्रीय मुख्यालय/POWERGRID, SRTS-II, RHQ  
 भारत सरकार का उद्यम/A Government of India Enterprise  
 सिंगनायकहल्ली/Singanayakanahalli,  
 येलाहंका होंबली, बंगलूरु/ Yelahanka Hobli, Bangalore-560 064

State sector fibre optic communication system ( KSEBL- DOCO: 01.06.2015) under Fiber Optic Communication system in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave links in Southern Region as per CERC order dtd.29.07.2016

(Amount in Rs.)

Year	Tariff for (KSEBL)	Tariff for the month of OCTOBER'22 (tariff p.a. /12)
2022-23*	58000	4833

\*Note: These charges are being billed provisionally for the 2019-24 block in accordance with Regulation 10, clause (4) of CERC (Terms & conditions of tariff) Regulations, 2019 and are subject to adjustments as and when CERC issues revised tariff order.

  
**रश्मि मोहराना/Rashmi Moharana**  
 प्रबंधक(वाणिज्य)/Manager (Commercial)  
 दक्षिणा प-II क्षेत्रीय मुख्यालय/POWERGRID, SRTS-II, RHQ  
 भारत सरकार का उद्यम/A Government of India Enterprise  
 सिंगनायकनहल्ली/Singanayakanahalli,  
 येलाहंका हॉबली, बेंगलूर/ Yelahanka Hobli, Bangalore-560 064

## POWER GRID CORPORATION OF INDIA LTD

## ULDC CHARGES (STATE SECTOR)

## APPORTIONMENT OF AMOUNT - BETWEEN AP &amp; TELANGANA

Total AP & Telangana's  
Amount :

11,08,438

(from Summary WS)

Month :	Oct-22	Amount in Rs.
CUSTOMER	ALLOCATION*	BILL AMOUNT
	in %	in Rs.
AP	46.11	5,11,101
Telangana	53.89	5,97,337
TOTAL	100.00	11,08,438



**रश्मि मोहराना/Rashmi Moharana**  
 प्रबंधक(वाणिज्य)/Manager (Commercial)  
 दक्षिण प-॥ क्षेत्रीय मुख्यालय/POWERGRID, SRTS-II, RHQ  
 भारत सरकार का उद्यम/A Government of India Enterprise  
 सिंगनायकनहल्ली/Singanayakanahalli,  
 येल्हंका हॉबली, बेंगलूर/ Yelahanka Hobli, Bangalore-560 064

**Annexure-XII****Energy Sold through Power Exchanges during  
FY 2016-17 to FY 2022-23 (Upto October 2022)**

FY	Month	Traded Qty (MU)	Total Revenue (Rs in Cr)
2016-17	April'2016	0	0
	May'2016	2.969	0.583
	June'2016	15.136	3.1
	July'2016	39.072	7.025
	August'2016	14.986	2.097
	September'2016	28.334	5.194
	October'2016	26.693	5.195
	November'2016	11.292	1.633
	December'2016	9.797	1.7103
	January'2017	20.507	3.343
	February'2017	1.637	0.439
	March'2017	0	0
<b>Total (2016-17)</b>		<b>170.423</b>	<b>30.319</b>

FY	Month	Traded Qty (MU)	Total Revenue (Rs in Cr)
2017-18	April'2017	1.486	0.419
	May'2017	88.379	23.233
	June'2017	98.387	22.932
	July'2017	0	0
	August'2017	11.835	2.81
	September'2017	19.634	7.414
	October'2017	533.162	206.199
	November'2017	194.058	65.413
	December'2017	155.164	50.745
	January'2018	153.447	46.603
	February'2018	230.732	74.211
	March'2018	231.712	88.271
<b>Total (2017-18)</b>		<b>1717.996</b>	<b>588.25</b>

FY	Month	Traded Qty (MU)	Total Revenue (Rs in Cr)
2018-19	April'2018	479.575	160.948
	May'2018	621.323	242.032
	June'2018	319.037	101.832
	July'2018	69.386	21.727
	August'2018	325.863	97.107
	September'2018	27.814	8.17
	October'2018	0	0
	November'2018	121.867	41.504
	December'2018	89.915	28.923
	January'2019	45.864	16.611
	February'2019	68.998	21.664
	March'2019	54.528	15.896
<b>Total (2018-19)</b>		<b>2224.17</b>	<b>756.414</b>

FY	Month	Traded Qty (MU)	Total Revenue (Rs in Cr)
2019-20	April'2019	163.463	46.0843
	May'2019	138.025	40.626
	June'2019	138.123	42.009
	July'2019	40.405	12.094
	August'2019	3.895	1.1443
	September'2019	159.85	43.307
	October'2019	54.722	15.176
	November'2019	45.36	12.49
	December'2019	4.173	1.341
	January'2020	0	0
	February'2020	0	0
	March'2020	0	0
	<b>Total (2019-20)</b>		<b>748.016</b>

FY	Month	Traded Qty (MU)	Total Revenue (Rs in Cr)
2020-21	April'2020	0	0
	May'2020	30.553	7.467
	June'2020	0.0205	0.0044
	July'2020	10.878	3.853
	August'2020	41.484	10.576
	September'2020	104.049	32.816
	October'2020	249.642	76.127
	November'2020	233.298	75.716
	December'2020	103.856	35.56
	January'2021	32.175	11.302
	February'2021	26.438	10.159
	March'2021	5.351	2.355
	<b>Total (2020-21)</b>		<b>837.7445</b>

FY	Month	Traded Qty (MU)	Total Revenue (Rs in Cr)
2021-22	April'2021	170.718	61.228
	May'2021	368.479	112.836
	June'2021	156.355	52.404
	July'2021	265.292	92.234
	August'2021	451.776	291.705
	September'2021	827.007	369.317
	October'2021	765.512	631.997
	November'2021	305.687	103.848
	December'2021	107.590	40.580
	January'2022	61.297	25.716
	February'2022	76.498	39.741
	March'2022	64.533	69.402
	<b>Total (2021-22)</b>		<b>3620.746</b>

FY	Month	Traded Qty (MU)	Total Revenue (Rs in Cr)
2022-23	April'2022	80.201	78.964
	May'2022	284.681	196.290
	June'2022	90.163	59.717
	July'2022	100.805	73.771
	August'2022	497.417	308.074
	September'2022	650.876	446.763
	October'2022	818.764	309.505
	November'2022		
	December'2022		
	January'2022		
	February'2022		
	March'2022		
	<b>Total (2021-22)</b>		<b>2522.907</b>

## **Annexure-XIII**

**LOAD SHAPES**

Expected Hourly Percentage Loads in a Day -Category Wise																			
Hour of the Day	Low Tension Categories								High tension (11kV)							High tension (33kV)			
	Domestic (LT I)	Commercial (LT II)	Industry (LT III)	Cottage Industry (LT IV)	Agriculture (LT V)	Street Lighting & PWS (LT VI)	Others (LT VII & LT VIII)	Spare	Industry (HT IA)	Ferro Alloys (HT IB)	Others (HT II)	Railway Stations, Bus Stations & Airports (HT III)	Irrigation, Agriculture & CPWS (HT IV)	Townships & Residential Colonies (HT VI)	Spare (Temporary)	Industry (HT IA)	Ferro Alloys (HT IB)	Others (HT II)	Stations, Bus Stations & Airports (HT III)
1 A:M	75%	64%	62%	67%	67%	100.00%	30.00%	1.00%	62%	19.94%	74%	58%	75%	76%	1.00%	76%	91.50%	83%	28.71%
2 A:M	74%	64%	61%	68%	73%	73.12%	30.00%	1.00%	69%	19.62%	73%	52%	75%	73%	1.00%	76%	87.49%	83%	25.55%
3 A:M	71%	61%	61%	71%	76%	70.72%	30.00%	1.00%	67%	19.20%	69%	48%	76%	73%	1.00%	75%	89.72%	82%	24.82%
4 A:M	73%	61%	61%	71%	73%	70.10%	30.00%	1.00%	68%	19.48%	68%	48%	79%	74%	1.00%	74%	93.07%	82%	31.32%
5 A:M	77%	64%	64%	69%	77%	80.80%	30.00%	1.00%	65%	19.94%	71%	48%	80%	75%	1.00%	74%	93.66%	82%	27.02%
6 A:M	83%	72%	72%	77%	92%	85.24%	50.00%	1.00%	70%	21.37%	75%	55%	84%	80%	1.00%	73%	93.38%	85%	33.22%
7 A:M	90%	75%	71%	81%	88%	87.20%	50.00%	1.00%	73%	23.48%	87%	81%	88%	81%	1.00%	75%	92.74%	88%	41.19%
8 A:M	95%	79%	79%	100%	89%	87.88%	40.00%	1.00%	81%	25.59%	84%	82%	91%	100%	1.00%	74%	91.24%	92%	44.40%
9 A:M	92%	81%	88%	98%	93%	86.42%	40.00%	1.00%	87%	28.10%	84%	81%	90%	81%	1.00%	75%	100.00%	95%	55.50%
10 A:M	93%	85%	91%	97%	90%	89.61%	50.00%	1.00%	95%	32.61%	85%	81%	90%	85%	1.00%	75%	96.59%	97%	56.33%
11 A:M	92%	91%	100%	96%	96%	90.83%	60.00%	1.00%	97%	73.09%	89%	80%	91%	76%	1.00%	76%	93.06%	99%	70.22%
12 A:M	93%	94%	99%	89%	92%	91.02%	30.00%	1.00%	100%	95.31%	92%	85%	91%	77%	1.00%	77%	92.04%	100%	88.44%
13 P:M	89%	94%	94%	92%	91%	82.97%	30.00%	1.00%	97%	100.00%	92%	85%	88%	75%	1.00%	78%	83.49%	99%	99.00%
14 P:M	88%	92%	93%	91%	90%	79.39%	60.00%	1.00%	95%	70.56%	91%	84%	100%	77%	1.00%	78%	85.16%	98%	95.98%
15 P:M	87%	89%	95%	77%	100%	89.70%	30.00%	1.00%	98%	75.10%	86%	85%	88%	78%	1.00%	100%	87.97%	100%	87.53%
16 P:M	86%	89%	98%	77%	90%	89.70%	40.00%	1.00%	96%	73.97%	86%	85%	89%	78%	1.00%	81%	84.06%	99%	86.12%
17 P:M	88%	91%	94%	76%	82%	92.74%	50.00%	1.00%	99%	73.86%	91%	84%	89%	79%	1.00%	82%	92.34%	96%	86.36%
18 P:M	95%	95%	87%	84%	75%	93.72%	70.00%	1.00%	82%	77.64%	96%	82%	87%	81%	1.00%	81%	95.56%	92%	78.95%
19 P:M	100%	100%	84%	80%	76%	92.01%	60.00%	1.00%	79%	76.86%	100%	100%	82%	80%	1.00%	80%	87.82%	91%	74.00%
20 P:M	100%	94%	79%	74%	69%	88.18%	80.00%	1.00%	76%	66.27%	97%	97%	79%	76%	1.00%	79%	71.36%	90%	79.95%
21 P:M	97%	89%	78%	73%	68%	87.95%	60.00%	1.00%	72%	47.01%	92%	93%	75%	75%	1.00%	79%	84.86%	90%	60.64%
22 P:M	93%	82%	69%	70%	74%	88.45%	60.00%	1.00%	69%	30.89%	89%	95%	75%	78%	1.00%	80%	86.94%	88%	51.13%
23 P:M	87%	76%	68%	69%	71%	83.76%	40.00%	1.00%	68%	25.34%	83%	84%	77%	80%	1.00%	78%	91.04%	88%	44.39%
24 P:M	84%	71%	65%	69%	73%	78.94%	30.00%	1.00%	67%	22.17%	79%	72%	75%	75%	1.00%	77%	87.44%	88%	37.28%

Note: Demand readings on the Feeders are assumed to be taken after switching operation takes place.

<b>Load Factor</b>	87.5%	81.33%	79.77%	79.92%	81.92%	85.85%	45.00%	1.00%	80.59%	47.39%	84.80%	76.90%	83.91%	78.41%	1.00%	78.05%	89.69%	91.15%	58.67%
<b>Sum of load factors %</b>	21.01	19.5	19.1	19.2	19.7	20.6	10.8	0.2	19.3	11.4	20.4	18.5	20.1	18.8	0.2	18.7	21.5	21.9	14.1
<b>Peak %</b>	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	80.00%	1.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	1.00%	100.00%	100.00%	100.00%	99.00%
<b>Cat: Peak Demand</b>	1376	423	134	1	1603	63	48	19	601	0	248	1	27	29	2022	968	7	142	0
<b>Daily MU</b>	28.897	8.25	2.56	0.03	31.53	1.29	0.51	0.00	11.62	0.00	5.05	0.01	0.55	0.54	0.49	18.14	0.15	3.11	0.00
<b>Total Daily MU</b>	152.7																		
<b>Annual Load Factor</b>	28.897	8.254	2.556	0.028	31.527	1.294	0.513	0.004	11.618	0.001	5.049	0.013	0.545	0.541	0.485	18.142	0.153	3.108	0.000

kV)											Total demand for the hour
EHT											
Irrigation, Agriculture & CPWS (HT IV)	Townships & Residential Colonies (HT VI)	Spare (Temporary)	Industry (HT IA)	Ferro Alloys (HT IB)	Others (HT II)	Stations, Bus Stations & Airports (HT III)	Irrigation, Agriculture & CPWS (HT IV)	Traction (HT V)	HMR (HT VB)	Spare (Townships & Residential Colonies)	
20.00%	34.26%	1.00%	81%	90%	42%	79%	74%	66%	68.51%	1.00%	5500.1
20.00%	37.97%	1.00%	83%	88%	44%	83%	75%	66%	68.43%	1.00%	5626.5
20.00%	43.28%	1.00%	81%	87%	47%	85%	75%	64%	67.75%	1.00%	5577.4
20.00%	45.77%	1.00%	81%	83%	51%	86%	75%	66%	68.00%	1.00%	5547.0
20.00%	38.97%	1.00%	81%	89%	61%	86%	77%	83%	69.17%	1.00%	5706.2
30.00%	45.65%	1.00%	83%	94%	67%	87%	83%	73%	76.84%	1.00%	6213.0
40.00%	43.59%	1.00%	86%	95%	89%	86%	99%	90%	96.15%	1.00%	6557.6
55.00%	60.39%	1.00%	94%	95%	94%	87%	100%	79%	94.41%	1.00%	6770.0
60.00%	60.74%	1.00%	99%	94%	93%	85%	95%	76%	90.76%	1.00%	6849.2
75.00%	70.66%	1.00%	100%	94%	94%	88%	90%	100%	73.29%	1.00%	6879.4
85.00%	80.48%	1.00%	93%	93%	96%	88%	89%	71%	82.50%	1.00%	6957.5
60.00%	93.31%	1.00%	96%	94%	80%	91%	93%	74%	81.66%	1.00%	6984.0
50.00%	92.83%	1.00%	94%	88%	80%	90%	92%	77%	83.01%	1.00%	6862.9
50.00%	95.80%	1.00%	91%	89%	98%	88%	89%	69%	75.34%	1.00%	6767.6
40.00%	98.07%	1.00%	98%	95%	97%	88%	95%	71%	75.25%	1.00%	7225.1
40.00%	100.00%	1.00%	92%	96%	96%	86%	94%	72%	77.87%	1.00%	6825.7
60.00%	94.62%	1.00%	95%	97%	98%	88%	88%	82%	88.00%	1.00%	6746.3
93.00%	93.23%	1.00%	93%	100%	97%	89%	76%	75%	94.63%	1.00%	6505.9
90.00%	86.31%	1.00%	89%	96%	96%	88%	65%	83%	100.00%	1.00%	6430.6
90.00%	84.41%	1.00%	87%	94%	50%	88%	63%	82%	95.32%	1.00%	6216.8
85.00%	85.20%	1.00%	88%	93%	50%	99%	64%	74%	94.98%	1.00%	6092.8
75.00%	73.43%	1.00%	90%	93%	50%	94%	66%	73%	82.03%	1.00%	6089.0
20.00%	65.22%	1.00%	90%	94%	50%	98%	71%	68%	76.21%	1.00%	5902.2
20.00%	64.30%	1.00%	90%	94%	50%	100%	74%	63%	67.26%	1.00%	5870.8
											<b>7225.1</b>

50.75%	70.35%	1.00%	89.72%	92.73%	73.77%	88.71%	81.77%	74.85%	81.14%	1.00%
12.2	16.9	0.2	21.5	22.3	17.7	21.3	19.6	18.0	19.5	0.2
93.00%	100.00%	1.00%	100.00%	100.00%	97.93%	100.00%	100.00%	100.00%	100.00%	1.00%
66	23	470	663	29	8	8	1100	86	15	0
0.80	0.39	0.11	14.29	0.64	0.14	0.16	21.59	1.55	0.30	0.00
0.804	0.394	0.113	14.285	0.641	0.135	0.160	21.589	1.552	0.301	0.000



Category Wise Expected Hourly Demand																			
Hour of the Day	Low Tension Categories										High tension								
	Domestic	Commercial	Industry	Cottage Industry	Agriculture	Street Lighting & PWS	Others	Spare	CPWS (Carved out of LT -VI CPWS sales & LT: III Industry Category)	Industry	Ferro Alloys	Others	Railway Stations, Bus Stations & Airports	Irrigation, Agriculture & CPWS	Townships & Residential Colonies	Spare (Temporary)	CPWS (Carved out of HT -IV(B) CPWS sales & HT: I (A) Industry Category)	Industry	
1 A:M	1183	311	95	1	1234	72	16	0	0	413	0	203	0	22	24	22	0	764	
2 A:M	1172	310	93	1	1351	53	16	0	0	459	0	199	0	22	23	22	0	763	
3 A:M	1128	297	94	1	1399	51	16	0	0	443	0	189	0	23	23	22	0	752	
4 A:M	1152	295	94	1	1345	51	16	0	0	451	0	186	0	23	24	22	0	747	
5 A:M	1221	311	98	1	1419	59	16	0	0	429	0	194	0	24	24	22	0	745	
6 A:M	1333	357	112	1	1721	63	28	0	0	468	0	208	0	25	26	23	0	744	
7 A:M	1460	373	112	1	1664	64	28	0	0	492	0	242	1	27	26	23	0	763	
8 A:M	1537	393	125	2	1684	65	22	0	0	547	0	234	1	28	32	23	0	755	
9 A:M	1508	406	140	2	1775	64	23	0	0	587	0	234	1	27	26	23	0	764	
10 A:M	1512	427	145	2	1718	67	28	0	0	645	0	237	1	27	27	23	0	769	
11 A:M	1502	457	159	2	1839	68	34	0	0	662	0	250	1	28	25	23	0	779	
12 A:M	1519	472	158	2	1759	68	17	0	0	679	0	259	1	28	25	23	0	789	
13 P:M	1460	470	149	2	1725	62	17	0	0	659	0	257	1	27	24	23	0	792	
14 P:M	1441	459	148	2	1710	59	34	0	0	646	0	254	1	30	25	23	0	796	
15 P:M	1423	448	152	1	1913	67	17	0	0	669	0	243	1	27	25	23	0	1023	
16 P:M	1403	445	156	1	1706	67	23	0	0	652	0	242	1	27	25	23	0	828	
17 P:M	1434	455	148	1	1557	69	28	0	0	671	0	253	1	27	25	23	0	834	
18 P:M	1534	475	136	1	1421	69	39	0	0	551	0	267	1	26	26	23	0	826	
19 P:M	1620	500	132	1	1445	68	34	0	0	531	0	279	1	25	26	23	0	814	
20 P:M	1616	468	124	1	1298	65	45	0	0	514	0	268	1	24	25	23	0	799	
21 P:M	1556	439	122	1	1273	65	33	0	0	483	0	256	1	23	24	23	0	803	
22 P:M	1487	407	108	1	1381	65	33	0	0	459	0	247	1	23	25	23	0	810	
23 P:M	1387	372	105	1	1325	61	22	0	0	451	0	230	1	23	25	22	0	793	
24 P:M	1336	349	101	1	1360	57	17	0	0	443	0	217	1	22	24	22	0	784	
Peak day	1620	500	159	2	1913	72	45	0	0	679	0	279	1	30	32	23	0	1023	
CUST-DEMAND (COINCIDENT EVI	1423	448	152	1	1913	67	17	0	0	669	0	243	1	27	25	23	0	1023	
CUST-DEMAND (COINCIDENT MO	1502	457	159	2	1839	68	34	0	0	662	0	250	1	28	25	23	0	779	

s at AP TRANSCO exit Point on the Peak day (MU)

High Tension (33kV)										EHT										Total System Demand			
Ferro Alloys	Others	Railway Stations, Bus Stations & Airports	Irrigation, Agriculture & CPWS	Townships & Residential Colonies	Spare (Temporary)	CPWS (Carved out of HT -IV(B) CPWS sales & HT: I (A) Industry Category)	Industry	Ferro Alloys	Others	Railway Stations, Bus Stations & Airports	Irrigation, Agriculture & CPWS	Traction	HMR (HT VB)	Spare (Townships & Residential Colonies)	CPWS (Carved out of HT -IV(B) CPWS sales & HT: I (A) Industry Category)	LT	HT (11kV)	HT (33kV)	EHT	Total Demand			
7	122	0	14	8	5	0	539	26	3	6	811	57	11	0	0	2913	684	920	1452	5969			
6	124	0	14	9	5	0	550	25	3	6	826	57	11	0	0	2996	725	921	1479	6121			
7	121	0	14	11	5	0	540	25	4	6	828	55	10	0	0	2987	700	910	1469	6065			
7	122	0	14	11	5	0	536	24	4	6	824	57	11	0	0	2953	707	905	1463	6028			
7	122	0	14	9	5	0	540	26	5	6	844	72	11	0	0	3125	694	902	1504	6224			
7	126	0	21	11	5	0	552	27	5	7	917	63	12	0	0	3614	750	914	1583	6862			
7	132	0	28	11	5	0	568	27	7	6	1084	77	15	0	0	3703	811	945	1785	7243			
7	137	0	38	15	5	0	626	27	7	7	1100	68	15	0	0	3828	865	956	1850	7499			
7	141	0	42	15	5	0	657	27	7	6	1043	66	14	0	0	3918	898	975	1820	7611			
7	145	0	52	17	5	0	663	27	7	7	993	86	11	0	0	3898	960	996	1795	7650			
7	148	0	59	20	5	0	616	27	7	7	983	61	13	0	0	4061	988	1018	1713	7780			
7	150	0	42	23	5	0	634	27	6	7	1019	64	13	0	0	3995	1014	1015	1769	7793			
6	149	0	35	23	5	0	622	25	6	7	1011	66	13	0	0	3885	991	1010	1750	7637			
6	147	0	35	24	5	0	600	26	7	7	975	60	12	0	0	3852	979	1012	1687	7530			
7	150	0	28	24	5	0	649	27	7	7	1048	61	12	0	0	4021	988	1237	1811	8057			
6	148	0	28	25	5	0	610	28	7	6	1039	62	12	0	0	3800	970	1040	1765	7575			
7	144	0	42	23	5	0	631	28	7	7	968	71	14	0	0	3692	1000	1055	1726	7473			
7	138	0	65	23	5	0	614	29	7	7	838	65	15	0	0	3677	895	1063	1575	7210			
7	135	0	62	21	5	0	594	28	7	7	712	72	15	0	0	3800	884	1044	1435	7164			
5	134	0	62	21	5	0	579	27	4	7	696	71	15	0	0	3617	854	1026	1397	6894			
6	134	0	59	21	5	0	581	27	4	7	706	64	15	0	0	3489	808	1027	1404	6729			
6	132	0	52	18	5	0	594	27	4	7	728	63	13	0	0	3482	777	1023	1436	6718			
7	130	0	14	16	5	0	595	27	4	7	777	58	12	0	0	3273	752	965	1480	6470			
7	130	0	14	16	5	0	595	27	4	8	817	55	10	0	0	3221	729	955	1516	6422			
7	150	0	65	25	5	0	663	29	7	8	1100	86	15	0	0	4061	1014	1237	1850	8057			
7	150	0	28	24	5	0	649	27	7	7	1048	61	12	0	0	4021	988	1237	1811				
7	148	0	59	20	5	0	616	27	7	7	983	61	13	0	0	4061	988	1018	1713				

## **Annexure-XIV**

Other income (Rs. in crores)	2016-17				Remarks
	Other income as per audited accountns	NTI of Distribution Business	NTI Retail supply Business	Others	
Incidental Charges-Work	36.30	36.30	0		
Sale of Scrap	-0.65	-0.65		0.00	
Penalties from Suppliers	7.55	7.55			
SDs & BGs forfeited	3.09	3.09		0.00	
Price Variation	4.84	4.84			
Wheeling charges	4.64	4.64		0.00	
Rebate From Funding Agency	0.79	0.79			
Miscellaneous income	1.59	1.59			
Sale of Tender Schedule	0.26	0.26		0.00	
Rent from Fixed Assets	0.24	0.24			
Meter Testing Charges	0.23	0.23			
Registration Fees	0.46	0.46			
Interest on Staff loans & advances	0.14	0.14			
Penalty from employees	0.02	0.02			
Transformer Testing Charges	0.03	0.03		0.00	
<b>NTI Distribution</b>		<b>59.53</b>			
Prior Period	-3.04		-3.04		
Other income	65.26		3.49	61.77	Rs. 61.77 crores pertains to penalty for non-booking corridor in TPCIL, RRAs, GBI etc. adjusted in PP Cost
Capacitor Surcharge	20.80		20.80		
Interest on Others (ED)	3.62		3.62		
Reactive Income	0.31		0.31		
Grid supporting /Application charge	0.504		0.50		
Interest on Bank	2.53		2.53		
Application Registration Fee	1.82		1.82		
Reconnection Fee –LT	0.97		0.97		
Reconnection Fee –HT	0.31		0.31		
<b>NTI Retail supply business</b>	<b>93.09</b>		<b>31.32</b>	<b>61.77</b>	

Other income (Rs. in crores)	2017-18			
	Other income as per audited accountns	NTI of Distribution Business	NTI Retail supply Business	Others
Incidental Charges-Work	44.06	44.06		
Sale of Scrap	1.89	1.89		
Penalties from Suppliers	6.87	6.87		
SDs & BGs forfeited	4.74	4.74		
Price Variation	-5.05	-5.05		
Wheeling charges	27.23	27.23		
Rebate From Funding Agency	0.26	0.26		
Miscellaneous income	-1.73	-1.73		
Sale of Tender Schedule	0.22	0.22		
Rent from Fixed Assets	0.30	0.30		
Meter Testing Charges	0.61	0.61		
Registration Fees	0.49	0.49		
Interest on Staff loans & advances	0.26	0.26		
Penalty from employees	0.03	0.03		
Transformer Testing Charges	0.01	0.01		
<b>NTI Distribution</b>	<b>80.18</b>	<b>80.18</b>		
Prior Period	5.18		5.18	
Other income	1.39		1.39	
Capacitor Surcharge	20.21		20.21	
Interest on Others (ED)	4.30		4.30	
Reactive Income	0.00		0.00	
Grid supporting /Application charge	0.20		0.20	
Interest on Bank	5.57		5.57	
Application Registration Fee	2.14		2.14	
Reconnection Fee –LT	0.92		0.92	
Reconnection Fee –HT	0.05		0.05	
<b>NTI Retail supply business</b>	<b>39.96</b>	<b>0.00</b>	<b>39.96</b>	

## **Annexure-XV**

2023-24

Calculation weighted average cost of power purchase			
Sl.No	Particulars	SPDCL	NPDCCL
		Rs. Crs	Rs. Crs
1	Weighted average cost per unit	4.69	4.69

**Trasmission charge**

Voltage	Charge/Rate (Rs/kW/Month)	Rs. kWh
>=132 kV	145.14	0.25
<b>Load Factor for 132 Kv</b>		80%
<b>Load Factor for 33Kv</b>		36%
<b>Load Factor for 11 Kv</b>		26%
<b>Load Factor for LT</b>		17%

**Distribution charge**

Voltage	SPDCL		NPDCCL	
	Charge (Rs./kVA/month)	Rs. kWh	Charge (Rs./kVA/month)	Rs. kWh
LT	860.67	7.03	1,436.38	11.74
11kV	341.95	1.83	722.99	3.86
33kV	38.82	0.15	72.29	0.28
>=132kV		0.25		0.25

**Loss calculation**

**TSSPDCL**

Voltage (in KV)	Loss %	Cummulative loss
>=132 Kv	2.50%	
33 KV	3.60%	6.01%
11 KV	4.10%	9.86%
LT	4.75%	14.15%

**TSNPDCCL**

Voltage (in KV)	Loss %	Cummulative loss
>=132 Kv	2.50%	
33 KV	3.48%	5.89%
11 KV	3.77%	9.44%
LT	4.75%	13.74%

CSS calculation for 2023-24  
SPDCL

105%

Sl. No	Category	Average realisation (@ Proposed Tariff)	Weighted average PP cost	Aggregate AT&C loss %	Aggregate T & D charge	Cost of carrying Regulatory asset	CSS	20% limit of AR	Arrived CSS for FY 23-24	CSS approved for FY 22-23 in TO	OA Actuals H1 (in MU)	OA projections H2 (in MU)	OA for FY 24 (in MU)	Revenue from CSS for H1	Revenue from CSS for H2	Total Revenue from CSS (in Crs)
<b>HIGH TENSION</b>																
<b>HT Category at 11 kV</b>																
1	HT-I Industry Segregated (Poultry Included)	9.59	4.69	9.86%	2.08	-	2.31	1.92	1.92	1.97	-	0.71	0.71	-	0.14	0.14
3	HT-II - Others	11.26	4.69	9.86%	2.08	-	3.99	2.25	2.25	2.33	1.41	2.34	3.75	0.32	0.53	0.84
4	HT-III Airports, Railways and Bustations	10.33	4.69	9.86%	2.08	-	3.05	2.07	2.07	2.26	-	-	-	-	-	-
5	HT -IV A Lift Irrigation and agriculture	8.37	4.69	9.86%	2.08	-	1.09	1.67	1.09	1.05	-	-	-	-	-	-
7	HT-VI Townships and Residential Colonies	8.84	4.69	9.86%	2.08	-	1.56	1.77	1.56	1.88	-	-	-	-	-	-
9	HT -Temporary Supply	15.02	4.69	9.86%	2.08	-	7.75	3.00	3.00	3.34	-	-	-	-	-	-
10	HT - EV	6.90	4.69	9.86%	2.08	-	-	1.38	-	1.38	-	-	-	-	-	-
<b>HT Category at 33 kV</b>																
11	HT-I Industry Segregated (Poultry Included)	8.62	4.69	6.01%	0.40	-	3.23	1.72	1.72	1.74	105.25	228.82	334.06	18.14	39.43	57.57
12	HT-I (B) Ferro-Alloys	7.93	4.69	6.01%	0.40	-	2.54	1.59	1.59	-	-	-	-	-	-	-
13	HT-II - Others	9.71	4.69	6.01%	0.40	-	4.32	1.94	1.94	2.03	15.19	18.25	33.44	2.95	3.54	6.49
15	HT -IV A Lift Irrigation and agriculture	11.05	4.69	6.01%	0.40	-	5.66	2.21	2.21	1.24	-	-	-	-	-	-
17	HT-VI Townships and Residential Colonies	8.42	4.69	6.01%	0.40	-	3.04	1.68	1.68	1.78	-	-	-	-	-	-
19	HT -Temporary Supply	13.42	4.69	6.01%	0.40	-	8.03	2.68	2.68	2.97	-	-	-	-	-	-
<b>HT Category at 132 kV</b>																
21	HT-I Industry Segregated	7.77	4.69	2.50%	0.25	-	2.71	1.55	1.55	1.53	91.44	138.73	230.18	14.21	21.55	35.76
22	HT-I (B) Ferro-Alloys	7.98	4.69	2.50%	0.25	-	2.92	1.60	1.60	-	-	-	-	-	-	-
23	HT-II - Others	9.61	4.69	2.50%	0.25	-	4.55	1.92	1.92	1.98	-	-	-	-	-	-
24	HT-III Airports, Railways and Bustations	8.62	4.69	2.50%	0.25	-	3.57	1.72	1.72	1.62	-	-	-	-	-	-
25	HT -IV A Lift Irrigation and agriculture	6.97	4.69	2.50%	0.25	-	1.91	1.39	1.39	1.41	-	-	-	-	-	-
27	HT-V Railway Traction	6.32	4.69	2.50%	0.25	-	1.27	1.26	1.26	1.40	-	-	-	-	-	-
Updated											213.29	388.86	602.14	35.61	65.19	101

**CSS calculation for 2023-24**  
**NPDCCL**

Category	Average realisation	Weighted average PP cost	Aggregate AT&C loss %	Aggregate T & D charge	Cost of carrying Regulatory asset	CSS	20% limit of AR	CSS Arrived
<b>HIGH TENSION</b>								
<b>HT Category at 11 kV</b>								
HT-I Industry Segregated	9.46	4.69	9.44%	4.11	-	0.16	1.89	0.16
HT-II - Others	11.57	4.69	9.44%	4.11	-	2.27	2.31	2.27
HT-III Airports, Railways and Bustations	10.12	4.69	9.44%	4.11	-	0.82	2.02	0.82
HT -IV A Lift Irrigation and agriculture	11.11	4.69	9.44%	4.11	-	1.81	2.22	1.81
HT-VI Townships and Residential Colonies	8.81	4.69	9.44%	4.11	-	-	1.76	-
HT -Temporary Supply	14.99	4.69	9.44%	4.11	-	5.69	3.00	3.00
<b>HT Category at 33 kV</b>								
HT-I Industry Segregated	9.26	4.69	5.89%	0.53	-	3.74	1.85	1.85
HT-II - Others	12.50	4.69	5.89%	0.53	-	6.98	2.50	2.50
HT -IV A Lift Irrigation and agriculture	13.52	4.69	5.89%	0.53	-	8.00	2.70	2.70
HT-VI Townships and Residential Colonies	8.93	4.69	5.89%	0.53	-	3.41	1.79	1.79
HT -Temporary Supply	23.38	4.69	5.89%	0.53	-	17.86	4.68	4.68
<b>HT Category at 132 kV</b>								
HT-I Industry Segregated	8.66	4.69	2.50%	0.25	-	3.60	1.73	1.73
HT-II - Others	22.19	4.69	2.50%	0.25	-	17.12	4.44	4.44
HT -IV A Lift Irrigation and agriculture	7.32	4.69	2.50%	0.25	-	2.26	1.46	1.46
HT-V Railway Traction	6.44	4.69	2.50%	0.25	-	1.37	1.29	1.29
HT-VI Townships and Residential Colonies	8.01	4.69	2.50%	0.25	-	2.94	1.60	1.60
Updated								



## **ANNEXURE-XVI**

Refer to Notes for the definition
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Base Year																			
Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity (MW)	DISCOM's share (%)	DISCOM's share (MW)	Availability and Dispatch (MU)		Cost (Rs. Crs.)							Unit Cost (Rs. / kWh)					
					Net Availability	Dispatch	Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total	
<b>TSGENCO</b>																			
<b>Thermal</b>																			
KTPS A	2	180.00	70.55	126.99	749.31	749.31	94.35	239.76					334.11	1.26	0.00	0.00	0.00	3.20	4.46
KTPS B	2	120.00	70.55	84.66	749.31	749.31	94.35	239.76					334.11	1.26	0.00	0.00	0.00	3.20	4.46
KTPS C	2	120.00	70.55	84.66	749.31	749.31	94.35	239.76					334.11	1.26	0.00	0.00	0.00	3.20	4.46
KTPS D	2	500.00	70.55	352.75	2406.59	2406.59	194.69	679.08					873.77	0.81	0.00	0.00	0.00	2.82	3.63
KTPS Stage VI	2	500.00	70.55	352.75	2508.59	2508.59	348.69	784.69					1133.38	1.39	0.00	0.00	0.00	3.13	4.52
RTS B	2	62.50	70.55	44.09	260.72	260.72	37.64	76.72					114.36	1.44	0.00	0.00	0.00	2.94	4.39
NTS				0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kakatiya Thermal Power Plant Stage I	2	500.00	70.55	352.75	2596.72	2596.72	360.31	868.59					1228.90	1.39	0.00	0.00	0.00	3.34	4.73
Kakatiya Thermal Power Plant Stage II	2	600.00	70.55	423.30	2568.42	2568.42	437.57	751.06					1188.63	1.70	0.00	0.00	0.00	2.92	4.63
BTPS (Manuguru New Project)	2	1,080.00	70.55	761.94	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
KTPS VII	2	800.00	70.55	564.40	1323.65	1323.65	228.38	323.32					551.69	1.73	0.00	0.00	0.00	2.44	4.17
<b>TOTAL THERMAL</b>		<b>4462.50</b>		<b>3148.29</b>	<b>13912.62</b>	<b>13912.62</b>	<b>1690.32</b>	<b>4202.74</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6093.06</b>	<b>1.36</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.02</b>	<b>4.38</b>
MACHKUND PH TS Share	1	84.00	38.02	31.94	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00
TUNGBHADRA PH TS Share	1	57.60	38.02	21.90	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00
USL	1	240.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00
LSR	1	460.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00
DONKARAYI	1	25.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSLM	1	770.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00
NSPH	1	815.60	70.55	575.41	268.95	268.95	194.56	0.00					194.56	7.23	0.00	0.00	0.00	0.00	7.23
NSRCPH	1	90.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00
NSLCPH	1	60.00	70.55	42.33	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00
POCHAMPAD PH	1	27.00	70.55	19.05	17.29	17.29	4.88	0.00					4.88	2.82	0.00	0.00	0.00	0.00	2.82
NIZAMSAGAR PH	1	10.00	70.55	7.06	3.90	3.90	-0.16	0.00					-0.16	-0.40	0.00	0.00	0.00	0.00	-0.40
PABM	1	20.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINI HYDRO&OTHERS	1	1.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00
SINGUR	1	15.00	70.55	10.58	4.47	4.47	23.10	0.00					23.10	51.69	0.00	0.00	0.00	0.00	51.69
SSLM LCPH	1	900.00	70.55	634.95	689.42	689.42	283.00	0.00					283.00	4.10	0.00	0.00	0.00	0.00	4.10
Nagarjunasagar Tail Pond Dam Power House	1	50.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00
Priyadarshini Jurala Hydro Electric Project- AP Share	1	234.00	35.28	82.54	85.29	85.29	37.98	0.00					37.98	4.45	0.00	0.00	0.00	0.00	4.45
Lower Jurala Hydro Electric Project	1	240.00	70.55	169.32	103.59	103.59	196.56	0.00					196.56	18.98	0.00	0.00	0.00	0.00	18.98
POCHAMPAD Stage-II	1	9.00	70.55	6.35	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00
PULICHINTAL(New Project)	1	120.00	70.55	84.66	14.20	14.20	50.52	0.00					50.52	35.59	0.00	0.00	0.00	0.00	35.59
Mini Hydrel & Others (Peddapalli, Palair)	1	11.16	70.55	7.87	0.79	0.79	4.77	0.00					4.77	60.32	0.00	0.00	0.00	0.00	60.32
Ramagin Wind Mills (AP)	1	0.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pochampad Stage-IV	1	0.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL HYDRO</b>		<b>4239.36</b>		<b>1693.95</b>	<b>1187.90</b>	<b>1187.90</b>	<b>795.22</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>795.22</b>	<b>6.69</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.69</b>
<b>TOTAL TSGENCO</b>		<b>8701.86</b>		<b>4842.25</b>	<b>15100.52</b>	<b>15100.52</b>	<b>2685.54</b>	<b>4202.74</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6888.28</b>	<b>1.78</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.78</b>	<b>4.56</b>
<b>Central Generating Stations</b>																			
<b>NTPC</b>																			
<b>NTPC (SR)</b>																			
NTPC (SR)	2	2100.00	11.61	243.71	1614.44	1614.44	132.28	431.34					563.61	0.82	0.00	0.00	0.00	2.67	3.49
NTPC (SR) Stage III	2	500.00	12.23	61.17	400.74	400.74	34.83	98.72					133.55	0.87	0.00	0.00	0.00	2.46	3.33
<b>Total NTPC(SR)</b>		<b>2600.00</b>		<b>304.88</b>	<b>2015.18</b>	<b>2015.18</b>	<b>167.11</b>	<b>530.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>697.17</b>	<b>0.83</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.63</b>	<b>3.46</b>

Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity (MW)	DISCOM's share (%)	DISCOM's share (MW)	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)					
					Net Availability	Dispatch	Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total
<b>NTPC (ER)</b>																		
Farakka	2				0.00	0.00	-0.01	0.00										
Kahalgaon	2			0.00	0.00	0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00
Talcher - Stage 1	2				0.00	0.00	-0.01	0.00										
Talcher Stage 2	2	2000.00	7.56	151.26	997.23	997.23	83.71	169.66					253.37	0.84	0.00	0.00	0.00	1.70
Others	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
<b>Total NTPC(ER)</b>		<b>2000.00</b>		<b>151.26</b>	<b>997.23</b>	<b>997.23</b>	<b>83.69</b>	<b>169.66</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>253.35</b>	<b>0.84</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.70</b>
<b>Total NTPC</b>		<b>4600.00</b>		<b>456.14</b>	<b>3012.42</b>	<b>3012.42</b>	<b>250.80</b>	<b>699.72</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>950.52</b>	<b>0.83</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.32</b>
<b>NLC TS-II</b>																		
Stage-I	2	630.00	6.71	42.27	227.08	227.08	33.18	56.34					89.52	1.46	0.00	0.00	0.00	2.48
Stage-II	2	840.00	8.83	74.14	414.17	414.17	28.68	105.74					134.41	0.69	0.00	0.00	0.00	2.55
<b>Total NLC</b>		<b>1470.00</b>		<b>116.41</b>	<b>641.24</b>	<b>641.24</b>	<b>61.86</b>	<b>162.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>223.93</b>	<b>0.96</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.53</b>
<b>NPC</b>																		
NPC-MAPS	1	440.00	3.65	16.05	43.14	43.14	0.00	11.77					11.77	0.00	0.00	0.00	0.00	2.73
NPC-Kaiga unit I	1	440.00	11.29	49.67	761.42	761.42	0.00	289.74					289.74	0.00	0.00	0.00	0.00	3.81
NPC-Kaiga unit II	1	440.00	11.98	52.71	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
<b>Total NPC</b>		<b>1320.00</b>		<b>118.43</b>	<b>804.55</b>	<b>804.55</b>	<b>0.00</b>	<b>301.51</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>301.51</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.75</b>
<b>NTPC - Simhadri</b>																		
NTPC Simhadri Stage I	2	1000.00	38.02	380.19	2402.21	2402.21	312.75	708.71					1021.46	1.30	0.00	0.00	0.00	2.95
NTPC Simhadri Stage II	2	1000.00	16.32	163.18	851.56	851.56	189.47	260.83					450.30	2.22	0.00	0.00	0.00	3.06
<b>Total NTPC- Simhadri</b>		<b>2000.00</b>		<b>543.38</b>	<b>3253.77</b>	<b>3253.77</b>	<b>502.22</b>	<b>969.54</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>1471.76</b>	<b>1.54</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.98</b>
<b>CGS - New</b>																		
Vallur Thermal Power Plant	2	1500.00	5.21	78.10	331.17	331.17	93.70	126.02					219.72	2.83	0.00	0.00	0.00	3.81
Tuticorin/NLC Tamilnadu Power Ltd	2	1000.00	10.74	107.45	504.27	504.27	139.69	159.38					299.06	2.77	0.00	0.00	0.00	3.16
NPC-Kundnkulam	1	1000.00	3.53	35.28	107.26	107.26	0.00	45.17					45.17	0.00	0.00	0.00	0.00	4.21
Kudligi	2	2400.00	7.99	191.67	620.39	620.39	187.06	237.45					424.51	3.02	0.00	0.00	0.00	3.83
NTPC Aravali Power	2			0.00	0.00	0.00		0.00					0.00	0.00	0.00	0.00	0.00	0.00
NCE - Bundled Power (Coal) ( NTPC 200 MW)		193.00	70.55	136.16	1110.10	1110.10	0.00	367.68					367.68	0.00	0.00	0.00	0.00	3.31
NCE-Bundled Power (NVNVL) coal		85.00	38.02	32.32	170.03	170.03	0.00	72.68					72.68	0.00	0.00	0.00	0.00	4.27
<b>TOTAL CGS</b>		<b>15568.00</b>		<b>1815.32</b>	<b>10555.18</b>	<b>10555.18</b>	<b>1235.32</b>	<b>3141.23</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>4376.55</b>	<b>1.17</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.98</b>
<b>APGPCL</b>																		
APGPCL I - Allocated capacity	2	100.00	4.71	4.71	13.73	13.73	1.02	4.27					5.29	0.74	0.00	0.00	0.00	3.11
APGPCL I - Unutilised capacity	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
APGPCL II - Allocated capacity	2	172.00	7.32	12.58	39.40	39.40	1.76	11.12					12.88	0.45	0.00	0.00	0.00	2.82
APGPCL II - Unutilised capacity	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
<b>Total APGPCL</b>		<b>272.00</b>		<b>17.29</b>	<b>53.13</b>	<b>53.13</b>	<b>2.79</b>	<b>15.39</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>18.17</b>	<b>0.52</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.90</b>
<b>IPPS</b>																		
GVK	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
Spectrum	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
Kondapalli (Naphtha)	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
Kondapalli (Gas)	2			0.00	0.00	0.00	0.41						0.41	0.00	0.00	0.00	0.00	0.00
BSES	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
GVK Extension	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
Vemagiri	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
Gautami	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
Konaseema	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL IPPS</b>		<b>0.00</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.41</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>0.41</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity	DISCOM's share	DISCOM's share	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)								
					(MW)	(%)	(MW)	Net Availability	Dispatch	Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total
<b>NCE</b>																					
NCE - Bio-Mass	1	18.00	100.00	18.00	32.53	32.53			18.93				18.93	0.00	0.00	0.00	0.00	5.82	5.82		
NCE - Bagasse	1	15.00	100.00	15.00	23.89	23.89			10.35				10.35	0.00	0.00	0.00	0.00	4.33	4.33		
NCE - Municipal Waste to Energy	1	0.00	100.00	0.00	0.00	0.00			0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00		
NCE - Industrial Waste based power project	1	7.50	100.00	7.50	46.22	46.22			28.79				28.79	0.00	0.00	0.00	0.00	6.23	6.23		
NCE - Wind Power	1	100.80	100.00	100.80	230.49	230.49			108.18				108.18	0.00	0.00	0.00	0.00	4.69	4.69		
NCE - Mini Hydel	1	1.55	100.00	1.55	2.35	2.35	0.61						0.61	2.60	0.00	0.00	0.00	0.00	2.60		
NCE - NCL Energy Ltd	1				0.00	0.00			0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00		
NCE-Solar	1	1863.74	100.00	1863.74	3597.69	3597.69			2162.67				2162.67	0.00	0.00	0.00	0.00	6.01	6.01		
NCE - Bundled Power NVVNL (solar) JNNM Ph 1	1	85.00	38.02	32.32	40.17	40.17			43.24				43.24	0.00	0.00	0.00	0.00	10.76	10.76		
NCE - Bundled Power (Solar) (NTPC 400 MW)	1	400.00	70.55	282.20	579.25	579.25			273.71				273.71	0.00	0.00	0.00	0.00	4.73	4.73		
NCE-Others	1			0.00	0.00	0.00			0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00		
<b>TOTAL NCE</b>		<b>2491.59</b>		<b>2321.11</b>	<b>4552.58</b>	<b>4552.58</b>	<b>0.61</b>		<b>2645.86</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2646.48</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.81</b>	<b>5.81</b>		
<b>OTHERS</b>																					
Srivathsa	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
LVS	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Vishakapatnam Steel Plant	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
NB Ferro Alloys	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Singareni I & II	2	1200.00	70.55	846.60	5737.24	5737.24	1052.56	1388.90					2441.46	1.83	0.00	0.00	0.00	2.42	4.26		
Thermal Power Tech	2	500.00	38.02	190.10	1341.92	1341.92	233.38	281.61					514.99	1.74	0.00	0.00	0.00	2.10	3.84		
CSPGCL	2	1000.00	70.55	705.50	3759.64	3759.64	1015.10	451.16					1466.26	2.70	0.00	0.00	0.00	1.20	3.90		
Thermal Power Tech Unit II	2	570.00	70.55	402.14	2606.94	2606.94	706.66	631.67					1338.34	2.71	0.00	0.00	0.00	2.42	5.13		
<b>TOTAL OTHERS</b>		<b>3270.00</b>		<b>2144.33</b>	<b>13445.74</b>	<b>13445.74</b>	<b>3007.70</b>	<b>2753.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5761.05</b>	<b>2.24</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.05</b>	<b>4.28</b>		
<b>MARKET</b>																					
Bilateral Sales (PTC etc.)					4539.05	4539.05	47.77	2293.46			103.85		2445.09	0.11	0.00	0.00	0.23	5.05	5.39		
Sale of Power					-1229.35	-1229.35		-432.21					-432.21	0.00	0.00	0.00	0.00	3.52	3.52		
D-D Sales/Purchase & UI					-486.17	-486.17		-374.86					-374.86	0.00	0.00	0.00	0.00	7.71	7.71		
UI-SRPC/Deviation charges					0.00	0.00		80.86					80.86	0.00	0.00	0.00	0.00	0.00	0.00		
Interest on Pension Bonds					0.00	0.00	482.80						482.80	0.00	0.00	0.00	0.00	0.00	0.00		
Reactive					0.00	0.00	4.11						4.11	0.00	0.00	0.00	0.00	0.00	0.00		
Whseeling KPTCL					0.00	0.00	0.09						0.09	0.00	0.00	0.00	0.00	0.00	0.00		
Whseeling Tantransco/Asset Maintenance & RKM					0.00	0.00	41.30						41.30	0.00	0.00	0.00	0.00	0.00	0.00		
Thermal incentive 18-19/ROCE True up					0.00	0.00	18.98						18.98	0.00	0.00	0.00	0.00	0.00	0.00		
Adv Income Tax 2018-19					0.00	0.00	18.22						18.22	0.00	0.00	0.00	0.00	0.00	0.00		
STOA Prov 2018-19					0.00	0.00	6.30						6.30	0.00	0.00	0.00	0.00	0.00	0.00		
Miscellaneous (Provisional Reversal 2017-18 etc.)					0.00	0.00	-47.15						-47.15	0.00	0.00	0.00	0.00	0.00	0.00		
<b>TOTAL MARKET</b>		<b>0.00</b>		<b>0.00</b>	<b>2823.53</b>	<b>2823.53</b>	<b>572.43</b>	<b>1567.26</b>	<b>0.00</b>	<b>0.00</b>	<b>103.85</b>	<b>0.00</b>	<b>2243.53</b>	<b>2.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.37</b>	<b>5.55</b>	<b>7.95</b>		
<b>TOTAL (From All Sources)</b>		<b>30303.45</b>		<b>11140.29</b>	<b>46530.68</b>	<b>46530.68</b>	<b>7504.80</b>	<b>14325.82</b>	<b>0.00</b>	<b>0.00</b>	<b>103.85</b>	<b>0.00</b>	<b>21934.46</b>	<b>1.61</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>3.08</b>	<b>4.71</b>		

1) Details of NCE Plant wise to be filled in Form 1.4 [i,ii,iii,iv]  
2) Hydro cost break up details to be provided based on appropriate methodology. In case it is not possible to segregate the cost Station wise, provide the total details in the empty rows in the TSGENCO Hydro stations section saying ALL TSGENCO Hydro (Combined)

2019-20

Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity	DISCOM's share	DISCOM's share	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)								
					(MW)	(%)	(MW)	Net Availability	Dispatch	Fixed	Variable	Incentive	Inc. Tax	Others	Total	Fixed	Inctv	Inc. Tax	Others	Variable	Total
<b>TSGENCO</b>																					
<b>Thermal</b>																					
KTPS A	2	180.00	70.55	126.99	613.05	613.05	100.54	202.49			0.27		303.30	1.64	0.00	0.00	0.00	3.30	4.95		
KTPS B	2	120.00	70.55	84.66	408.70	408.70	67.03	134.99			0.18		202.20	1.64	0.00	0.00	0.00	3.30	4.95		
KTPS C	2	120.00	70.55	84.66	408.70	408.70	67.03	134.99			0.18		202.20	1.64	0.00	0.00	0.00	3.30	4.95		
KTPS D	2	500.00	70.55	352.75	2265.63	2265.63	202.46	626.20			0.99		829.65	0.89	0.00	0.00	0.00	2.76	3.66		
KTPS Stage VI	2	500.00	70.55	352.75	2393.07	2393.07	367.70	651.87			1.05		1020.62	1.54	0.00	0.00	0.00	2.72	4.26		
RTS B	2	62.50	70.55	44.09	245.41	245.41	38.44	73.84					112.39	1.57	0.00	0.00	0.00	3.01	4.58		

Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity	DISCOM's share	DISCOM's share	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)								
					(MW)	%	(MW)	Net Availability	Dispatch	Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total
NTS	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Kakatiya Thermal Power Plant Stage I	2	500.00	70.55	352.75	2053.50	2053.50	366.04	618.79				0.90	985.73	1.78	0.00	0.00	0.00	3.01	4.80		
Kakatiya Thermal Power Plant Stage II	2	600.00	70.55	423.30	2992.97	2992.97	545.94	867.54				1.31	1414.79	1.82	0.00	0.00	0.00	2.90	4.73		
KTPS VII	2	800.00	70.55	564.40	2391.80	2391.80	291.93	609.58				1.05	902.56	1.22	0.00	0.00	0.00	2.55	3.77		
<b>TOTAL THERMAL</b>		<b>4462.50</b>		<b>3148.29</b>	<b>13772.85</b>	<b>13772.85</b>	<b>2047.11</b>	<b>3920.30</b>	<b>0.00</b>	<b>0.00</b>	<b>6.03</b>	<b>5973.44</b>	<b>1.49</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.85</b>	<b>4.34</b>		
MACHKUND PH TS Share	1	84.00	38.02	31.94	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
TUNGBHADRA PH TS Share	1	57.60	38.02	21.90	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
USL	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
LSR	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
DONKARAYI	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
SSLM	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
NISPH	1	815.60	70.55	575.41	1121.37	1121.37	190.13				-0.26	189.88	1.76	0.00	0.00	0.00	0.00	0.00	1.69		
NISRCPH	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
NISLCPH	1	60.00	70.55	42.33	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
POCHAMPAD PH	1	27.00	70.55	19.05	4.69	4.69	5.57				-0.01	5.56	11.87	0.00	0.00	0.00	-0.02	0.00	11.85		
NIZAMSAGAR PH	1	10.00	70.55	7.06	0.84	0.84	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
PABM	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
MINI HYDRO&OTHERS	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
SINGUR	1	15.00	70.55	10.58	28.70	28.70	23.27				-0.03	23.24	8.11	0.00	0.00	0.00	-0.01	0.00	8.10		
SSLM LCPH	1	900.00	70.55	634.95	1401.60	1401.60	310.46				-0.42	310.04	2.22	0.00	0.00	0.00	0.00	0.00	2.21		
Nagarjunasagar Tail Pond Dam Power House	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Priyadarshini Jurala Hydro Electric Project- AP Share	1	234.00	35.28	82.54	114.15	114.15	41.38				-0.06	41.33	3.63	0.00	0.00	0.00	0.00	0.00	3.62		
Lower Jurala Hydro Electric Project	1	240.00	70.55	169.32	217.74	217.74	200.69				-0.27	200.42	9.22	0.00	0.00	0.00	-0.01	0.00	9.20		
POCHAMPAD Stage-II	1	9.00	70.55	6.35	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
PULICHINTAL(New Project)	1	120.00	70.55	84.66	140.00	140.00	57.00				-0.08	56.92	4.07	0.00	0.00	0.00	-0.01	0.00	4.07		
Mini Hydel & Others (Peddapalli, Palair)	1	11.16	70.55	7.87	0.67	0.67	4.80				-0.01	4.80	71.63	0.00	0.00	0.00	-0.10	0.00	71.53		
Ramagin Wind Mills (AP)	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Pochampad Stage-IV	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
<b>TOTAL HYDRO</b>		<b>2583.36</b>		<b>1693.95</b>	<b>3029.76</b>	<b>3029.76</b>	<b>833.30</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>-1.12</b>	<b>832.18</b>	<b>2.75</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.75</b>		
<b>TOTAL TSGENCO</b>		<b>7045.86</b>		<b>4842.25</b>	<b>16802.61</b>	<b>16802.61</b>	<b>2880.41</b>	<b>3920.30</b>	<b>0.00</b>	<b>0.00</b>	<b>4.91</b>	<b>6805.62</b>	<b>1.71</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.33</b>	<b>4.05</b>		
<b>Central Generating Stations</b>																					
<b>NTPC</b>																					
<b>NTPC (SR)</b>																					
NTPC (SR)	2	2100.00	11.61	243.71	1432.69	1432.69	114.43	361.79			14.81	491.02	0.80	0.00	0.00	0.00	0.10	2.53	3.43		
NTPC (SR) Stage III	2	500.00	12.23	61.17	378.03	378.03	30.47	99.04			4.03	133.53	0.81	0.00	0.00	0.00	0.11	2.62	3.53		
<b>Total NTPC(SR)</b>		<b>2600.00</b>		<b>304.88</b>	<b>1810.72</b>	<b>1810.72</b>	<b>144.90</b>	<b>460.82</b>	<b>0.00</b>	<b>0.00</b>	<b>18.84</b>	<b>624.56</b>	<b>0.80</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.10</b>	<b>2.54</b>	<b>3.45</b>		
<b>NTPC (ER)</b>																					
Farakka	2			0.00	0.00	0.00	0.002	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Kahalgao	2			0.00	0.00	0.00	0.001	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Talcher - Stage 1	2			0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Talcher Stage 2	2	2000.00	7.56	151.26	969.57	969.57	76.10	197.04			8.49	281.63	0.78	0.00	0.00	0.00	0.09	2.03	2.90		
Others	2			0.00	0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
<b>Total NTPC(ER)</b>		<b>2000.00</b>		<b>151.26</b>	<b>969.57</b>	<b>969.57</b>	<b>76.10</b>	<b>197.04</b>	<b>0.00</b>	<b>0.00</b>	<b>8.49</b>	<b>281.64</b>	<b>0.78</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.09</b>	<b>2.03</b>	<b>2.90</b>		
<b>Total NTPC</b>		<b>4600.00</b>		<b>456.14</b>	<b>2780.29</b>	<b>2780.29</b>	<b>221.00</b>	<b>657.86</b>	<b>0.00</b>	<b>0.00</b>	<b>27.33</b>	<b>906.19</b>	<b>0.79</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.10</b>	<b>2.37</b>	<b>3.26</b>		
<b>NLC TS-II</b>																					
Stage-I	2	630.00	6.71	42.27	257.92	257.92	19.76	70.05			2.83	92.64	0.77	0.00	0.00	0.00	0.11	2.72	3.59		
Stage-II	2	840.00	8.83	74.14	441.95	441.95	35.78	120.20			4.91	160.90	0.81	0.00	0.00	0.00	0.11	2.72	3.64		
<b>Total NLC</b>		<b>1470.00</b>		<b>116.41</b>	<b>699.87</b>	<b>699.87</b>	<b>55.54</b>	<b>190.26</b>	<b>0.00</b>	<b>0.00</b>	<b>7.74</b>	<b>253.54</b>	<b>0.79</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>	<b>2.72</b>	<b>3.62</b>		

Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity	DISCOM's share	DISCOM's share	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)						
							Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total	
																			(MW)
<b>NPC</b>																			
NPC-MAPS	1	440.00	3.65	16.05	52.87	52.87	0.00	2.33				0.07	2.40	0.00	0.00	0.00	0.01	0.44	0.45
NPC-Kaiga unit I	1	440.00	11.29	49.67	382.70	382.70	0.00	99.40				3.09	102.49	0.00	0.00	0.00	0.08	2.60	2.68
NPC-Kaiga unit II	1	440.00	11.98	52.71	382.70	382.70	0.00	99.40				3.09	102.49	0.00	0.00	0.00	0.08	2.60	2.68
<b>Total NPC</b>		<b>1320.00</b>		<b>118.43</b>	<b>818.27</b>	<b>818.27</b>	<b>0.00</b>	<b>201.13</b>	<b>0.00</b>	<b>0.00</b>	<b>6.25</b>	<b>207.39</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.08</b>	<b>2.46</b>	<b>2.53</b>	
<b>NTPC - Simhadri</b>																			
NTPC Simhadri Stage I	2	1000.00	38.02	380.19	1845.24	1845.24	274.01	635.70				28.29	938.00	1.48	0.00	0.00	0.15	3.45	5.08
NTPC Simhadri Stage II	2	1000.00	16.32	163.18	849.32	849.32	165.32	284.30				13.98	463.60	1.95	0.00	0.00	0.16	3.35	5.46
<b>Total NTPC - Simhadri</b>		<b>2000.00</b>		<b>543.38</b>	<b>2694.56</b>	<b>2694.56</b>	<b>439.33</b>	<b>920.00</b>	<b>0.00</b>	<b>0.00</b>	<b>42.27</b>	<b>1401.60</b>	<b>1.63</b>	<b>0.00</b>	<b>0.00</b>	<b>0.16</b>	<b>3.41</b>	<b>5.20</b>	
<b>CGS - New</b>																			
Vallur Thermal Power Plant	2	1500.00	5.21	78.10	303.59	303.59	98.18	134.90				7.25	240.33	3.23	0.00	0.00	0.24	4.44	7.92
Tuticorin/NLC Tamilnadu Power Ltd	2	1000.00	10.74	107.45	529.15	529.15	112.61	154.79				8.32	275.71	2.13	0.00	0.00	0.16	2.93	5.21
NPC-Kundnkulam	1	1000.00	3.53	35.28	126.05	126.05		53.12				1.65	54.78	0.00	0.00	0.00	0.13	4.21	4.35
Kudigi	2	2400.00	7.99	191.67	398.74	398.74	235.71	147.27				11.91	394.89	5.91	0.00	0.00	0.30	3.69	9.90
NCE-Bundled Power (NVVNL) coal	1	85.00	38.02	32.32	148.60	148.60		71.29				2.22	73.50	0.00	0.00	0.00	0.15	4.80	4.95
NCE - Bundled Power (Coal) ( NTPC 200 MW )	1	193.00	70.55	136.16	972.19	972.19		387.76				36.19	423.96	0.00	0.00	0.00	0.37	3.99	4.36
Neyveli new unit - 1	2	500.00	5.08	25.40	23.98	23.98	4.10	5.51				0.30	9.91	1.71	0.00	0.00	0.12	2.30	4.13
NTPC Aravali Power				0.00	0.00	0.00	3.77	0.00				0.12	3.88	0.00	0.00	0.00	0.00	0.00	0.00
				0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
				0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL CGS</b>		<b>16068.00</b>		<b>1840.72</b>	<b>9495.29</b>	<b>9495.29</b>	<b>1170.23</b>	<b>2923.90</b>	<b>0.00</b>	<b>0.00</b>	<b>151.55</b>	<b>4245.68</b>	<b>1.23</b>	<b>0.00</b>	<b>0.00</b>	<b>0.16</b>	<b>3.08</b>	<b>4.47</b>	
<b>APGPCL</b>																			
APGPCL I - Allocated capacity	2	100.00	4.71	4.71	6.95	6.95	0.53	2.24				2.76	0.76	0.00	0.00	0.00	0.00	3.22	3.98
APGPCL I - Unutilised capacity	2				0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
APGPCL II - Allocated capacity	2	172.00	7.32	12.58	18.58	18.58	0.97	5.73				6.70	0.52	0.00	0.00	0.00	0.00	3.08	3.61
APGPCL II - Unutilised capacity	2				0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total APTGCL</b>		<b>272.00</b>		<b>17.29</b>	<b>25.53</b>	<b>25.53</b>	<b>1.50</b>	<b>7.97</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.47</b>	<b>0.59</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.12</b>	<b>3.71</b>
<b>IPPS</b>																			
GVK	2				0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spectrum	2				0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kondapalli (Naphtha)	2				0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kondapalli (Gas)	2				0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BSES	2				0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GVK Extension	2				0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vemagiri	2				0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gautami	2				0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Konaseema	2				0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL IPPS</b>		<b>0.00</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>NCE</b>																			
NCE - Bio-Mass	1	18.00	100.00	18.00	37.97	37.97		23.85				23.85	0.00	0.00	0.00	0.00	0.00	6.28	6.28
NCE - Bagasse	1	15.00	100.00	15.00	9.34	9.34		3.86				3.86	0.00	0.00	0.00	0.00	0.00	4.13	4.13
NCE - Municipal Waste to Energy	1	0.00	100.00	0.00	0.00	0.00		0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NCE - Industrial Waste based power project	1	7.50	100.00	7.50	14.06	14.06		5.89				5.89	0.00	0.00	0.00	0.00	0.00	4.19	4.19
NCE - Wind Power	1	100.80	100.00	100.80	185.19	185.19		82.24				82.24	0.00	0.00	0.00	0.00	0.00	4.44	4.44
NCE - Mini Hydel	1	1.55	100.00	1.55	2.99	2.99	0.81					0.81	2.70	0.00	0.00	0.00	0.00	2.70	2.70
NCE - NCL Energy Ltd	1		100.00	0.00	0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NCE-Solar	1	1951.74	100.00	1951.74	3564.93	3564.93		2134.83				-8.08	2126.75	0.00	0.00	0.00	-0.02	5.99	5.97



Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity	DISCOM's share	DISCOM's share	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)							
							Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total		
																			(MW)	(%)
DONKARAYI	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSLM	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NSPH	1	815.60	70.55	575.41	937.81	937.81	187.61						187.61	2.00	0.00	0.00	0.00	0.00	0.00	2.00
NSRCPH	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NSLCPH	1	60.00	70.55	42.33	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
POCHAMPAD PH	1	27.00	70.55	19.05	43.64	43.64	16.43						16.43	3.76	0.00	0.00	0.00	0.00	0.00	3.76
NIZAMSAGAR PH	1	10.00	70.55	7.06	6.11	6.11	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PABM	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINI HYDRO&OTHERS	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SINGUR	1	15.00	70.55	10.58	18.18	18.18	6.85						6.85	3.76	0.00	0.00	0.00	0.00	0.00	3.76
SSLM LCPH	1	900.00	70.55	634.95	860.75	860.75	243.61						243.61	2.83	0.00	0.00	0.00	0.00	0.00	2.83
Nagarjunasagar Tail Pond Dam Power House	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Priyadarshini Jurala Hydro Electric Project- AP Share	1	234.00	35.28	82.54	126.00	126.00	40.29						40.29	3.20	0.00	0.00	0.00	0.00	0.00	3.20
Lower Jurala Hydro Electric Project	1	240.00	70.55	169.32	275.79	275.79	200.69						200.69	7.28	0.00	0.00	0.00	0.00	0.00	7.28
POCHAMPAD Stage-II	1	9.00	70.55	6.35	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PULICHINTAL(New Project)	1	120.00	70.55	84.66	139.31	139.31	57.00						57.00	4.09	0.00	0.00	0.00	0.00	0.00	4.09
Ramagiri Wind Mills	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pochampad Stage-IV	1			0.00	7.25	7.25	5.57						5.57	7.68	0.00	0.00	0.00	0.00	0.00	7.68
Mini Hydel & Others (Peddapalli, Palair)	1	11.16	70.55	7.87	0.79	0.79	4.80						4.80	61.09	0.00	0.00	0.00	0.00	0.00	61.09
<b>TOTAL HYDRO</b>		<b>2583.36</b>		<b>1693.95</b>	<b>2415.64</b>	<b>2415.64</b>	<b>762.84</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>762.84</b>	<b>3.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.16</b>
<b>TOTAL TSGENCO</b>		<b>5285.86</b>		<b>3600.57</b>	<b>16242.22</b>	<b>16242.22</b>	<b>3391.79</b>	<b>3475.74</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6867.52</b>	<b>2.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.14</b>	<b>4.23</b>
<b>Central Generating Stations</b>																				
<b>NTPC</b>																				
<b>NTPC (SR)</b>																				
NTPC (SR)	2	2100.00	11.61	243.71	1499.14	1499.14	114.13	363.18			65.20		542.51	0.76	0.00	0.00	0.43	2.42	3.62	
NTPC (SR) Stage III	2	500.00	12.23	61.17	353.62	353.62	28.62	84.11					112.73	0.81	0.00	0.00	0.00	2.38	3.19	
<b>Total NTPC(SR)</b>		<b>2600.00</b>		<b>304.88</b>	<b>1852.76</b>	<b>1852.76</b>	<b>142.75</b>	<b>447.29</b>	<b>0.00</b>	<b>0.00</b>	<b>65.20</b>		<b>655.24</b>	<b>0.77</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>	<b>2.41</b>	<b>3.54</b>	
<b>NTPC (ER)</b>																				
Farakka	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kahalgaon	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Talcher - Stage 1	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Talcher Stage 2	2	2000.00	7.56	151.26	1061.37	1061.37	77.93	206.76					284.69	0.73	0.00	0.00	0.00	1.95	2.68	
Others	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total NTPC(ER)</b>		<b>2000.00</b>		<b>151.26</b>	<b>1061.37</b>	<b>1061.37</b>	<b>77.93</b>	<b>206.76</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>284.69</b>	<b>0.73</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.95</b>	<b>2.68</b>	
<b>Total NTPC</b>		<b>4600.00</b>		<b>456.14</b>	<b>2914.13</b>	<b>2914.13</b>	<b>220.68</b>	<b>654.05</b>	<b>0.00</b>	<b>0.00</b>	<b>65.20</b>		<b>939.93</b>	<b>0.76</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>	<b>2.24</b>	<b>3.23</b>	
<b>NLC TS-II</b>																				
Stage-I	2	630.00	6.71	42.27	208.06	208.06	15.45	56.72			59.03		131.21	0.74	0.00	0.00	2.84	2.73	6.31	
Stage-II	2	840.00	8.99	75.50	222.09	222.09	19.80	60.27					80.07	0.89	0.00	0.00	2.71	3.61		
<b>Total NLC</b>		<b>1470.00</b>		<b>117.77</b>	<b>430.15</b>	<b>430.15</b>	<b>35.25</b>	<b>116.99</b>	<b>0.00</b>	<b>0.00</b>	<b>59.03</b>		<b>211.28</b>	<b>0.82</b>	<b>0.00</b>	<b>0.00</b>	<b>1.37</b>	<b>2.72</b>	<b>4.91</b>	
<b>NPC</b>																				
NPC-MAPS	1	440.00	3.66	16.11	49.08	49.08	0.00	12.73					12.73	0.00	0.00	0.00	0.00	2.59	2.59	
NPC-Kaiga unit I	1	440.00	11.24	49.88	742.21	742.21	0.00	255.87			9.37		265.24	0.00	0.00	0.00	0.13	3.45	3.57	
NPC-Kaiga unit II	1	440.00	12.03	52.93	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total NPC</b>		<b>1320.00</b>		<b>118.92</b>	<b>791.29</b>	<b>791.29</b>	<b>0.00</b>	<b>268.60</b>	<b>0.00</b>	<b>0.00</b>	<b>9.37</b>		<b>277.97</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.12</b>	<b>3.39</b>	<b>3.51</b>	
<b>NTPC - Simhadri</b>																				
NTPC Simhadri Stage I	2	1000.00	38.02	380.19	1131.58	1131.58	284.61	372.53					657.14	2.52	0.00	0.00	0.00	3.29	5.81	
NTPC Simhadri Stage II	2	1000.00	16.32	163.18	770.72	770.72	171.49	238.96					410.45	2.23	0.00	0.00	0.00	3.10	5.33	
<b>Total NTPC- Simhadri</b>		<b>2000.00</b>		<b>543.38</b>	<b>1902.30</b>	<b>1902.30</b>	<b>456.09</b>	<b>611.49</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>1067.58</b>	<b>2.40</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.21</b>	<b>5.61</b>	



Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity	DISCOM's share	DISCOM's share	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)								
					(MW)	(% )	(MW)	Net Availability	Dispatch	Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total
<b>CGS - New</b>																					
Vallur Thermal Power Plant	2	1500.00	5.23	78.52	153.54	153.54	91.99	56.82				25.72	174.54	5.99	0.00	0.00	1.68	3.70	11.37		
Tuticorin/NLC Tamilnadu Power Ltd	2	1000.00	10.79	107.87	568.77	568.77	119.87	162.33				32.42	314.72	2.11	0.00	0.00	0.57	2.85	5.53		
NFC-Kundnkulam	1	1000.00	3.53	35.28	207.65	207.65	0.00	85.99					85.99	0.00	0.00	0.00	0.00	4.14	4.14		
Kudigi	2	2400.00	7.99	191.67	379.87	379.87	212.80	117.76					330.55	5.60	0.00	0.00	0.00	3.10	8.70		
NCE-Bundled Power (NVVNL) coal	1	85.00	38.02	32.32	143.74	143.74	0.00	64.13					64.13	0.00	0.00	0.00	0.00	4.46	4.46		
NCE - Bundled Power (Coal) ( NTPC 200 MW)	1	200.00	70.55	141.10	815.71	815.71	0.00	305.89				65.58	371.48	0.00	0.00	0.00	0.80	3.75	4.55		
NNTPS	2	500.00	4.38	21.91	133.94	133.94	24.35	30.96					55.30	1.82	0.00	0.00	0.00	2.31	4.13		
	2	500.00	4.38	21.91	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
<b>TOTAL CGS</b>		<b>16575.00</b>		<b>1866.77</b>	<b>8441.08</b>	<b>8441.08</b>	<b>1161.13</b>	<b>2475.01</b>	<b>0.00</b>	<b>0.00</b>	<b>257.32</b>	<b>3893.46</b>	<b>1.38</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.30</b>	<b>2.93</b>	<b>4.61</b>		
<b>APGPCL</b>																					
APGPCL I - Allocated capacity	2			0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00		
APGPCL I - Unutilised capacity	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
APGPCL II - Allocated capacity	2			0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00		
APGPCL II - Unutilised capacity	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
<b>Total APGPCL</b>		<b>0.00</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		
<b>IPPS</b>																					
GVK	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Spectrum	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Kondapalli (Naphtha)	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Kondapalli (Gas)	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
BSES	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
GVK Extension	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Vemagiri	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Gautami	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Konaseema	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
<b>TOTAL IPPS</b>		<b>0.00</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		
<b>NCE</b>																					
NCE - Bio-Mass	1	18.00	100.00	18.00	54.51	54.51	0.00	35.67			0.52		36.19	0.00	0.00	0.00	0.09	6.54	6.64		
NCE - Bagasse	1	15.00	100.00	15.00	8.60	8.60	0.00	3.62			0.00		3.62	0.00	0.00	0.00	0.00	4.21	4.21		
NCE - Municipal Waste to Energy	1	19.80	100.00	19.80	58.55	58.55	0.00	45.28			1.56		46.84	0.00	0.00	0.00	0.27	7.73	8.00		
NCE - Industrial Waste based power project	1	7.50	100.00	7.50	35.99	35.99	0.00	22.06			0.63		22.69	0.00	0.00	0.00	0.18	6.13	6.30		
NCE - Wind Power	1	100.80	100.00	100.80	191.55	191.55	0.00	91.56			2.37		93.93	0.00	0.00	0.00	0.12	4.78	4.90		
NCE - Mini Hydel	1	1.55	100.00	1.55	2.83	2.83	0.81	0.00			0.003		0.82	2.87	0.00	0.01	0.00	2.89	2.89		
NCE - NCL Energy Ltd	1		100.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
NCE-Solar	1	1951.74	100.00	1951.74	3553.00	3553.00	0.00	2125.05			-4.71		2120.34	0.00	0.00	0.00	-0.01	5.98	5.97		
NCE - Bundled Power NVVNL (solar) JNNM Ph 1	1	85.00	38.02	32.32	36.53	36.53	0.00	39.24					39.24	0.00	0.00	0.00	0.00	10.74	10.74		
NCE - Bundled Power (Solar) (NTPC 400 MW)	1	400.00	70.55	282.20	575.01	575.01	0.00	276.54				52.21	328.75	0.00	0.00	0.00	0.91	4.81	5.72		
<b>TOTAL NCE</b>		<b>2699.39</b>		<b>2428.91</b>	<b>4516.58</b>	<b>4516.58</b>	<b>0.81</b>	<b>2639.02</b>	<b>0.00</b>	<b>0.00</b>	<b>52.58</b>	<b>2692.41</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.12</b>	<b>5.84</b>	<b>5.96</b>		
<b>OTHERS</b>																					
Srnathsa	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
LVS	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Vishakapatnam Steel Plant	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
NB Ferro Alloys	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Singareni I & II	2	1200.00	70.55	846.60	4850.08	4850.08	1037.83	1235.46			8.93		2282.22	2.14	0.00	0.00	0.02	2.55	4.71		
Thermal Power Tech	2	500.00	38.02	190.10	2967.73	2967.73	744.66	630.64			77.56		1452.86	2.51	0.00	0.00	0.26	2.12	4.90		
CSPGCL	2	1000.00	70.55	705.50	2310.75	2310.75	627.17	277.29					904.46	2.71	0.00	0.00	0.00	1.20	3.91		
Thermal Power Tech Unit II	2	570.00	70.55	402.14	1325.47	1325.47	266.91	309.24				15.38	591.53	2.01	0.00	0.00	0.12	2.33	4.46		
<b>TOTAL OTHERS</b>		<b>3270.00</b>		<b>2144.33</b>	<b>11454.02</b>	<b>11454.02</b>	<b>2676.57</b>	<b>2452.63</b>	<b>0.00</b>	<b>0.00</b>	<b>101.86</b>	<b>5231.07</b>	<b>2.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.09</b>	<b>2.14</b>	<b>4.57</b>		



Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity (MW)	DISCOM's share (%)	DISCOM's share (MW)	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)								
					Net Availability	Dispatch	Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total			
SSLM LOPH	1	900.00	70.55	634.95	1450.73	1450.73	288.51							288.51	1.99	0.00	0.00	0.00	0.00	0.00	1.99
Nagarjunasagar Tail Pond Dam Power House	1				0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Priyadarshini Jurala Hydro Electric Project- AP Share	1	234.00	35.28	82.54	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lower Jurala Hydro Electric Project	1	240.00	70.55	169.32	372.56	372.56	221.03							221.03	5.93	0.00	0.00	0.00	0.00	0.00	5.93
POCHAMPAD Stage-II	1	9.00	70.55	6.35	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PULICHINTAL(New Project)	1	120.00	70.55	84.66	218.20	218.20	72.86							72.86	3.34	0.00	0.00	0.00	0.00	0.00	3.34
Ramagiri Wind Mills	1			0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pochampad Stage-IV	1			0.00	11.68	11.68	7.03							7.03	6.02	0.00	0.00	0.00	0.00	0.00	6.02
MINI HYDRO&OTHERS	1	11.16	70.55	7.87	77.91	77.91	39.23							39.23	0.00	0.00	0.00	0.00	0.00	#REF!	5.03
2014-21 Review petition order/true up claim					0.00	0.00	414.65							372.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Supplementary Bill					0.00	0.00	292.04							292.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colony Consumption					-7.19	-7.19								-4.53	0.00	0.00	0.00	0.00	0.00	6.30	6.30
														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL HYDRO</b>		<b>2583.36</b>		<b>1693.95</b>	<b>3812.68</b>	<b>3812.68</b>	<b>1559.20</b>	<b>-46.90</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1512.30</b>	<b>4.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>-0.12</b>	<b>2.26</b>	<b>3.97</b>
<b>TOTAL TSGENCO</b>		<b>6625.86</b>		<b>4545.94</b>	<b>20175.48</b>	<b>20175.48</b>	<b>5422.81</b>	<b>4560.42</b>	<b>0.00</b>	<b>0.00</b>	<b>-120.71</b>	<b>9862.51</b>	<b>2.69</b>	<b>0.00</b>	<b>0.00</b>	<b>-0.06</b>	<b>2.26</b>	<b>4.89</b>			
<b>Central Generating Stations</b>																					
<b>NTPC</b>																					
<b>NTPC (SR)</b>																					
NTPC (SR)	2	2100.00	11.61	243.71	1500.21	1500.21	128.89	420.85						549.74	0.86	0.00	0.00	0.00	0.00	2.81	3.66
NTPC (SR) Stage III	2	500.00	12.23	61.17	443.14	443.14	42.45	122.26						164.71	0.96	0.00	0.00	0.00	0.00	2.76	3.72
<b>Total NTPC(SR)</b>		<b>2600.00</b>		<b>304.88</b>	<b>1943.34</b>	<b>1943.34</b>	<b>171.34</b>	<b>543.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>714.45</b>	<b>0.88</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.79</b>	<b>3.68</b>	
<b>NTPC (ER)</b>																					
Farakka	2				0.00	0.00	0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kahalgaon	2			0.00	0.00	0.00	0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Talcher - Stage 1	2			0.00	0.00	0.00	9.89	0.00						9.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Talcher Stage 2	2	2000.00	7.56	151.26	1099.40	1099.40	83.33	192.70						276.03	0.76	0.00	0.00	0.00	1.75	2.51	2.51
NTPC Aravali	2			0.00	0.00	0.00		0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total NTPC(ER)</b>		<b>2000.00</b>		<b>151.26</b>	<b>1099.40</b>	<b>1099.40</b>	<b>93.22</b>	<b>192.70</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>285.92</b>	<b>0.85</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.75</b>	<b>2.60</b>	
<b>Total NTPC</b>		<b>4600.00</b>		<b>456.14</b>	<b>3042.75</b>	<b>3042.75</b>	<b>264.56</b>	<b>735.81</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1000.37</b>	<b>0.87</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.42</b>	<b>3.29</b>	
<b>NLC TS-II</b>																					
Stage-I	2	630.00	6.71	42.27	253.62	253.62	19.71	67.44						87.14	0.78	0.00	0.00	0.00	0.00	2.66	3.44
Stage-II	2	840.00	8.99	75.50	392.64	392.64	32.70	104.45						137.15	0.83	0.00	0.00	0.00	0.00	2.66	3.49
<b>Total NLC</b>		<b>1470.00</b>		<b>117.77</b>	<b>646.26</b>	<b>646.26</b>	<b>52.41</b>	<b>171.88</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>224.29</b>	<b>0.81</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.66</b>	<b>3.47</b>	
<b>NPC</b>																					
NPC-MAPS	1	440.00	3.66	16.11	30.11	30.11		7.45						7.45	0.00	0.00	0.00	0.00	2.47	2.47	
NPC-Kaiga unit I	1	440.00	11.34	49.88	780.34	780.34		273.26						273.26	0.00	0.00	0.00	0.00	3.50	3.50	
NPC-Kaiga unit II	1	440.00	12.03	52.93	0.00	0.00		0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Total NPC</b>		<b>1320.00</b>		<b>118.92</b>	<b>810.46</b>	<b>810.46</b>	<b>0.00</b>	<b>280.72</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>280.72</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.46</b>	<b>3.46</b>	
<b>NTPC - Simhadri</b>																					
NTPC Simhadri Stage I	2	1000.00	38.02	380.19	2247.33	2247.33	298.23	679.75						977.99	1.33	0.00	0.00	0.00	3.02	4.35	
NTPC Simhadri Stage II	2	1000.00	16.32	163.18	992.27	992.27	182.28	298.61						480.88	1.84	0.00	0.00	0.00	3.01	4.85	
<b>Total NTPC - Simhadri</b>		<b>2000.00</b>		<b>543.38</b>	<b>3239.60</b>	<b>3239.60</b>	<b>480.51</b>	<b>978.36</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1458.87</b>	<b>1.48</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.02</b>	<b>4.80</b>		
<b>CGS - New</b>																					
Vallur Thermal Power Plant	2	1500.00	5.23	78.52	403.16	403.16	98.34	147.81						246.15	2.44	0.00	0.00	0.00	3.67	6.11	
Tuticorin/NLC Tamilnadu Power Ltd	2	1000.00	10.79	107.87	457.47	457.47	100.46	169.14						269.60	2.20	0.00	0.00	0.00	3.70	5.89	
NPC-Kundnukulam	1	1000.00	7.99	79.86	246.38	246.38		102.23						102.23	0.00	0.00	0.00	0.00	4.15	4.15	
Kudijl	2	2400.00	3.53	84.66	584.08	584.08	215.05	229.26						444.31	3.68	0.00	0.00	0.00	3.93	7.61	
NCE-Bundled Power (NVVNL) coal	1	85.00	38.02	32.32	155.20	155.20		72.83						72.83	0.00	0.00	0.00	0.00	4.69	4.69	
NCE - Bundled Power (Coal) ( NTPC 200 MW)	1	200.00	70.55	141.10	863.07	863.07	0.00	342.98						342.98	0.00	0.00	0.00	0.00	3.97	3.97	
Neyveli new unit - 1	2	500.00	4.38	21.91	0.00	0.00		0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Neyveli new unit - 2	2	500.00	4.38	21.91	0.00	0.00		0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NNTPS					257.19	257.19	47.92	67.63						115.55							
NTPC Aravali					0.00	0.00		18.56						18.56	0.00	0.00	0.00	0.00	0.00	0.00	
<b>TOTAL CGS</b>		<b>16575.00</b>		<b>1804.35</b>	<b>10705.61</b>	<b>10705.61</b>	<b>1259.24</b>	<b>3317.21</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4576.46</b>	<b>1.18</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.10</b>	<b>4.27</b>	



Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity (MW)	DISCOM's share (%)	DISCOM's share (MW)	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)								
							Net Availability	Dispatch	Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total	
Netting off GENCO dues TS-AP					0.00	0.00		273.82						273.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PP Cost 2020-21 Prov.FOR 2021-22					0.00	0.00		-4.56						-4.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Banked Energy					0.00	0.00		14.95						14.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GBI RECEIVABLES					0.00	0.00		-7.15						-7.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Others					0.00	0.00		6.14						6.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
					0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
					0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL MARKET</b>		<b>550.00</b>		<b>388.03</b>	<b>1275.31</b>	<b>1275.31</b>	<b>30.24</b>	<b>673.23</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>703.46</b>	<b>0.24</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.28</b>	<b>5.52</b>
<b>TOTAL (From All Sources)</b>		<b>33620.12</b>		<b>14954.04</b>	<b>48671.38</b>	<b>48671.38</b>	<b>9045.29</b>	<b>14564.05</b>	<b>0.00</b>	<b>0.00</b>	<b>-120.71</b>	<b>23488.63</b>	<b>1.86</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>-0.02</b>	<b>2.99</b>	<b>4.83</b>		

1) Details of NCE Plant wise to be filled in Form 1.4 [i,i,i,i,v]  
2) Hydro cost break up details to be provided based on appropriate methodology. In case it is not possible to segregate the cost  
Station wise, provide the total details in the empty rows in the TSGENCO Hydro stations section saying ALL TSGENCO Hydro  
(Combined)

2022-23

Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity (MW)	DISCOM's share (%)	DISCOM's share (MW)	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)										
							Net Availability	Dispatch	Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total			
<b>TSGENCO</b>																							
<b>Thermal</b>																							
VTPS I	2		0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VTPS II	2		0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VTPS III	2		0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VTPS IV	2		0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RTPP I	2		0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RTPP Stage-II	2		0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RTPP Stage-III	2		0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KTPS A	2		70.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KTPS B	2		70.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KTPS C	2		70.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KTPS D	2	500.00	70.55	352.75	2265.43	2265.43	258.29	686.00					944.28	1.14	0.00	0.00	0.00	0.00	3.03	4.17			
KTPS Stage VI	2	62.50	70.55	44.09	2373.90	2373.90	368.13	752.61					1120.74	1.55	0.00	0.00	0.00	0.00	3.17	4.72			
RTS B	2			0.00	223.86	223.86	70.36	80.83					181.19	3.14	0.00	0.00	0.00	0.00	3.61	6.75			
NTS	2		70.55	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Kakatiya Thermal Power Plant Stage I	2	500.00	70.55	352.75	2155.02	2045.88	300.06	652.71					952.78	1.47	0.00	0.00	0.00	0.00	3.19	4.66			
Kakatiya Thermal Power Plant Stage II	2	600.00	70.55	423.30	2870.48	2870.48	508.03	899.38					1407.42	1.77	0.00	0.00	0.00	0.00	3.13	4.90			
BTPS (Manuguru New Project) - Unit 1	2	270.00	70.55	190.49	1063.14	1063.14	207.62	278.83					486.45	1.95	0.00	0.00	0.00	0.00	2.62	4.58			
BTPS (Manuguru New Project) - Unit 2	2	270.00	70.55	190.49	1063.14	1063.14	207.62	278.83					486.46	1.95	0.00	0.00	0.00	0.00	2.62	4.58			
BTPS (Manuguru New Project) - Unit 3	2	270.00	70.55	190.49	1063.14	1063.14	207.62	278.84					486.46	1.95	0.00	0.00	0.00	0.00	2.62	4.58			
BTPS (Manuguru New Project) - Unit 4	2	270.00	70.55	190.49	1063.14	1063.14	207.62	278.85					486.47	1.95	0.00	0.00	0.00	0.00	2.62	4.58			
KTPS VII	2	800.00	70.55	564.40	3368.26	3368.26	568.86	858.71					1427.57	1.69	0.00	0.00	0.00	0.00	2.55	4.24			
YTSPS - I	2	800.00	70.55	564.40	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
TSGENCO provision for water, IT, hydel sec EC, thermal incentives etc.					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
<b>TOTAL THERMAL</b>		<b>4342.50</b>		<b>3063.63</b>	<b>17509.52</b>	<b>17400.37</b>	<b>2904.23</b>	<b>5045.60</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7949.82</b>	<b>1.67</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.90</b>	<b>4.57</b>			
SSLM	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
NSPH	1	815.60	70.55	575.41	1543.64	1543.64	228.03						228.03	1.48	0.00	0.00	0.00	0.00	0.00	1.48			
NSRCPH	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
NSLCPH	1	60.00	70.55	42.33	85.29	85.29	16.77						16.77	1.97	0.00	0.00	0.00	0.00	0.00	1.97			
POCHAMPAD PH	1	27.00	70.55	19.05	71.19	71.19	17.36						17.36	2.44	0.00	0.00	0.00	0.00	0.00	2.44			
NIZAMSAGAR PH	1	10.00	70.55	7.06	18.88	18.88	6.43						6.43	3.41	0.00	0.00	0.00	0.00	0.00	3.41			
PABM	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
MINI HYDRO&OTHERS	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
SINGUR	1	15.00	70.55	10.58	21.53	21.53	9.65						9.65	4.48	0.00	0.00	0.00	0.00	0.00	4.48			
SSLM LCPH	1	900.00	70.55	634.95	1413.43	1413.43	327.34						327.34	2.32	0.00	0.00	0.00	0.00	0.00	2.32			
Nagarjunasagar Tail Pond Dam Power House	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Priyadarshini Jurala Hydro Electric Project- AP Share	1	234.00	35.28	82.54	175.14	175.14	43.92						43.92	2.51	0.00	0.00	0.00	0.00	0.00	2.51			
Lower Jurala Hydro Electric Project	1	240.00	70.55	169.32	313.91	313.91	187.21						187.21	5.96	0.00	0.00	0.00	0.00	0.00	5.96			
POCHAMPAD Stage-II	1	9.00	70.55	6.35	10.62	10.62	7.24						7.24	6.82	0.00	0.00	0.00	0.00	0.00	6.82			
PULLICHINTAL(New Project)	1	120.00	70.55	84.66	179.31	179.31	87.15						87.15	4.86	0.00	0.00	0.00	0.00	0.00	4.86			
Ramagiri Wind Mills	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Pochampad Stage-IV	1			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Mini Hydel & Others (Peddapalli, Palari)	1	11.16	70.55	7.87	6.95	6.95	7.78						7.78	11.19	0.00	0.00	0.00	0.00	0.00	11.19			
<b>TOTAL HYDRO</b>		<b>2441.76</b>		<b>1640.12</b>	<b>3839.88</b>	<b>3839.88</b>	<b>938.88</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>938.88</b>	<b>2.45</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.45</b>				
<b>TOTAL TSGENCO</b>		<b>6784.26</b>		<b>4703.75</b>	<b>21349.40</b>	<b>21240.25</b>	<b>3843.11</b>	<b>5045.60</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>												

Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity (MW)	DISCOM's share (%)	DISCOM's share (MW)	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)						
					Net Availability	Dispatch	Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total	
<b>Central Generating Stations</b>																			
<b>NTPC</b>																			
<b>NTPC (SR)</b>																			
NTPC (SR)	2	2100.00	11.61	243.71	1574.34	1574.34	120.84	543.96					664.81	0.77	0.00	0.00	0.00	3.46	4.22
NTPC (SR) Stage III	2	500.00	12.23	61.17	404.16	404.16	35.66	124.22					159.88	0.88	0.00	0.00	0.00	3.07	3.96
<b>Total NTPC(SR)</b>		<b>2600.00</b>		<b>304.88</b>	<b>1978.50</b>	<b>1978.50</b>	<b>156.50</b>	<b>668.18</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>824.69</b>	<b>0.79</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.38</b>	<b>4.17</b>
<b>NTPC (ER)</b>																			
Farakka	2				0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kahalgaon	2			0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
Talcher - Stage 1	2			0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
Talcher Stage 2	2	2000.00	7.56	151.26	1211.19	1211.19	87.11	233.05					320.16	0.72	0.00	0.00	0.00	1.92	2.64
Others	2			0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total NTPC(ER)</b>		<b>2000.00</b>		<b>151.26</b>	<b>1211.19</b>	<b>1211.19</b>	<b>87.11</b>	<b>233.05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>320.16</b>	<b>0.72</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.92</b>	<b>2.64</b>
<b>Total NTPC</b>		<b>4600.00</b>		<b>456.14</b>	<b>3189.69</b>	<b>3189.69</b>	<b>243.61</b>	<b>901.24</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>1144.85</b>	<b>0.76</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.83</b>	<b>3.59</b>
<b>NLC TS-II</b>																			
Stage-I	2	630.00	6.71	42.27	42.48	42.48	2.16	11.21					13.37	0.51	0.00	0.00	0.00	2.64	3.15
Stage-II	2	840.00	8.99	75.50	71.49	71.49	3.18	19.02					22.20	0.44	0.00	0.00	0.00	2.66	3.11
<b>Total NLC</b>		<b>1470.00</b>		<b>117.77</b>	<b>113.98</b>	<b>113.98</b>	<b>5.34</b>	<b>30.24</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>35.57</b>	<b>0.47</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.65</b>	<b>3.12</b>
<b>NPC</b>																			
NPC-MAPS	1	440.00	3.66	16.11	45.84	45.84		11.82					11.82	0.00	0.00	0.00	0.00	2.58	2.58
NPC-Kaiga unit I	1	440.00	11.34	49.88	560.17	560.17		195.06					195.06	0.00	0.00	0.00	0.00	3.55	3.55
NPC-Kaiga unit II	1	440.00	12.03	52.93	143.78	143.78		50.07					50.07	0.00	0.00	0.00	0.00	3.48	3.48
<b>Total NPC</b>		<b>1320.00</b>		<b>118.92</b>	<b>739.79</b>	<b>739.79</b>	<b>0.00</b>	<b>256.95</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>256.95</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.47</b>	<b>3.47</b>
<b>NTPC - Simhadri</b>																			
NTPC Simhadri Stage I	2	1000.00	38.02	380.19	2601.15	2601.15	289.78	947.78					1237.66	1.11	0.00	0.00	0.00	3.64	4.76
NTPC Simhadri Stage II	2	1000.00	16.32	163.18	1194.69	1194.69	212.35	420.25					632.60	1.78	0.00	0.00	0.00	3.52	5.30
<b>Total NTPC - Simhadri</b>		<b>2000.00</b>		<b>543.38</b>	<b>3795.84</b>	<b>3795.84</b>	<b>502.13</b>	<b>1368.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>1870.16</b>	<b>1.32</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.60</b>	<b>4.93</b>
<b>CGS - New</b>																			
Vallur Thermal Power Plant	2	1500.00	5.23	78.52	555.18	555.18	99.61	141.93					241.54	2.68	0.00	0.00	0.00	3.82	6.51
Tuticorin/NLC Taminadu Power Ltd	2	1000.00	10.79	107.87	871.58	871.58	132.90	191.70					324.60	2.87	0.00	0.00	0.00	4.14	7.00
NPC-Kundnkulam	1	1000.00	7.99	79.86	252.08	252.08		112.87					112.87	0.00	0.00	0.00	0.00	4.48	4.48
Kudligi	2	2400.00	3.53	84.66	1193.13	1193.13	230.23	340.46					570.69	3.61	0.00	0.00	0.00	5.33	8.94
NCE-Bundled Power (NVVNL) coal	1	85.00	38.02	32.32	210.68	210.68	68.49	132.23					200.72	3.25	0.00	0.00	0.00	6.28	9.53
NCE - Bundled Power (Coal) ( NTPC 200 MW)	1	200.00	70.55	141.10	985.02	985.02	0.00	405.11					405.11	0.00	0.00	0.00	0.00	4.11	4.11
Neyveli new unit - 1	2	500.00	4.38	21.91	292.68	292.68	50.93	64.61					115.54	1.74	0.00	0.00	0.00	2.21	3.95
Neyveli new unit - 2	2	500.00	4.38	21.91	22.03	22.03	3.16	4.86					8.02	1.43	0.00	0.00	0.00	2.21	3.64
Telangana STPP (phase I)	2	1600.00	59.97	959.48	816.94	816.94	184.63	185.45					370.08	2.26	0.00	0.00	0.00	2.27	4.53
				0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL CGS</b>		<b>18175.00</b>		<b>2763.83</b>	<b>13038.63</b>	<b>11891.99</b>	<b>1521.03</b>	<b>4135.67</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>5656.70</b>	<b>1.28</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.48</b>	<b>4.76</b>
<b>APGPCL</b>																			
APGPCL I - Allocated capacity	2			0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
APGPCL I - Unutilised capacity	2			0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
APGPCL II - Allocated capacity	2			0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
APGPCL II - Unutilised capacity	2			0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total APGPCL</b>		<b>0.00</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>NCE</b>																			
NCE - Bio-Mass	1	6.00	100.00	6.00	20.13	20.13		14.13					14.13	0.00	0.00	0.00	0.00	7.02	7.02
NCE - Bagasse	1	15.00	100.00	15.00	1.81	1.81		0.97					0.97	0.00	0.00	0.00	0.00	5.35	5.35
NCE - Municipal Waste to Energy	1	19.80	100.00	19.80	118.48	118.48		92.03					92.03	0.00	0.00	0.00	0.00	7.77	7.77
NCE - Industrial Waste based power project	1	7.50	100.00	7.50	20.18	20.18		14.23					14.23	0.00	0.00	0.00	0.00	7.05	7.05
NCE - Wind Power	1	128.10	100.00	128.10	237.80	237.80		109.41					109.41	0.00	0.00	0.00	0.00	4.60	4.60
NCE - Mini Hydel	1	1.55	100.00	1.55	0.00	0.00		0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
NCE - NCL Energy Ltd	1		100.00	0.00	0.00	0.00		0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
NCE-Solar	1	3728.07	100.00	3728.07	3511.95	3511.95		2094.35					2094.35	0.00	0.00	0.00	0.00	5.96	5.96
NCE - Bundled Power NVVNL (solar) JNNM Ph 1	1	85.00	38.02	32.32	26.24	26.24		28.09					28.09	0.00	0.00	0.00	0.00	10.71	10.71
NCE - Bundled Power (Solar) (NTPC 400 MW)	1	400.00	70.55	282.20	555.29	555.29		265.47					265.47	0.00	0.00	0.00	0.00	4.78	4.78
SECI 400 MW	1	1692.00	70.55	1193.71	490.45	490.45		134.74					134.74	0.00	0.00	0.00	0.00	2.75	2.75
NCE Nidhan Solar Ph I	1	400.00	70.55	282.20	300.20	300.20	25.93	59.70					85.62	0.86	0.00	0.00	0.00	1.99	2.85
NCE Others					896.55	896.55		253.25					253.25	0.00	0.00	0.00	0.00	2.82	2.82
					0.00	0.00		0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
					0.00	0.00		0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL NCE</b>		<b>6483.02</b>		<b>5696.44</b>	<b>6179.08</b>	<b>6179.08</b>	<b>25.93</b>	<b>3066.37</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>3092.30</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.96</b>	<b>5.00</b>

Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity	DISCOM's share	DISCOM's share	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)										
							(MW)	%	(MW)	Net Availability	Dispatch	Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total
<b>OTHERS</b>																							
Singareni I & II	2	1200.00	70.55	846.60	6082.49	5440.17	999.10	1773.93				7.06	2780.09	1.84	0.00	0.00	0.01	3.26	5.11				
Thermal Power Tech	2	500.00	38.02	190.10	1577.78	1577.78	224.35	365.31				25.62	615.28	1.42	0.00	0.00	0.16	2.32	3.90				
CSPGCL	2	1000.00	70.55	705.50	1913.78	1913.78	516.72	229.65					746.37	2.70	0.00	0.00	0.00	1.20	3.90				
Thermal Power Tech Unit II	2	570.00	70.55	402.14	3169.71	2007.97	768.64	615.71				3.11	1387.46	3.83	0.00	0.00	0.02	3.07	6.91				
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
<b>TOTAL OTHERS</b>		<b>3270.00</b>		<b>2144.33</b>	<b>12743.76</b>	<b>10939.69</b>	<b>2508.80</b>	<b>2984.60</b>	<b>0.00</b>	<b>0.00</b>	<b>35.79</b>	<b>5529.20</b>	<b>2.29</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>2.73</b>	<b>5.05</b>					
<b>MARKET</b>																							
PTC		550.00	70.55	388.03	0.00	0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00				
Other Short Term Sources					2551.34	3161.33			2079.96				2079.96	0.00	0.00	0.00	0.00	6.58	6.58				
D-D purchase/ sale					838.91	1183.01			451.10				451.10	0.00	0.00	0.00	0.00	3.81	3.81				
Other Costs (STOA, Asset Maintenance)					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
Interest on Pension Bonds					0.00	0.00	922.40						922.40	0.00	0.00	0.00	0.00	0.00	0.00				
Reactive					0.00	0.00	27.78						27.78	0.00	0.00	0.00	0.00	0.00	0.00				
Surplus					-1180.67	-1180.67			-805.32				-805.32	0.00	0.00	0.00	0.00	6.82	6.82				
UI					0.00	0.00	46.13						46.13	0.00	0.00	0.00	0.00	0.00	0.00				
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
					0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
<b>TOTAL MARKET</b>		<b>550.00</b>		<b>388.03</b>	<b>2209.58</b>	<b>3163.67</b>	<b>996.31</b>	<b>1725.75</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2722.05</b>	<b>3.15</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.45</b>	<b>8.60</b>				
<b>TOTAL (From All Sources)</b>		<b>35262.28</b>		<b>15696.38</b>	<b>55520.45</b>	<b>53414.69</b>	<b>8895.17</b>	<b>16957.99</b>	<b>0.00</b>	<b>0.00</b>	<b>35.79</b>	<b>25888.96</b>	<b>1.67</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>3.17</b>	<b>4.85</b>					

1) Details of NCE Plant wise to be filled in Form 1.4 [i.ii.ii.v]  
2) Hydro cost break up details to be provided based on appropriate methodology. In case it is not possible to segregate the cost

2023-24

Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity	DISCOM's share	DISCOM's share	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)										
							(MW)	%	(MW)	Net Availability	Dispatch	Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total
<b>TSGENCO</b>																							
<b>Thermal</b>																							
VTPS I	2	420.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
VTPS II	2	420.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
VTPS III	2	420.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
VTPS IV	2	500.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
RTPP I	2	420.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
RTPP Stage-II	2	420.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
RTPP Stage-III	2	210.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00				
KTPS A	2	240.00	70.55	169.32	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00				
KTPS B	2	240.00	70.55	169.32	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00				
KTPS C	2	240.00	70.55	169.32	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00				
KTPS D	2	500.00	70.55	352.75	2255.76	2255.76	268.82	601.84					870.65	1.19	0.00	0.00	0.00	2.67	3.86				
KTPS Stage VI	2	500.00	70.55	352.75	2292.97	2292.97	365.07	626.67					991.74	1.59	0.00	0.00	0.00	2.73	4.33				
RTS B	2	62.50	70.55	44.09	261.46	261.46	82.78	78.12					160.91	3.17	0.00	0.00	0.00	2.99	6.15				

Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity	DISCOM's share	DISCOM's share	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)												
					(MW)	%	(MW)	Net Availability	Dispatch	Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total				
																						(MW)	(%)	(MW)	Net Availability
NTS	2				0.00	0.00										0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Kakatiya Thermal Power Plant Stage I	2	500.00	70.55	352.75	2292.93	1973.21	293.51	598.87							892.38	1.49	0.00	0.00	0.00	3.04	3.04	4.52			
Kakatiya Thermal Power Plant Stage II	2	600.00	70.55	423.30	2766.42	2766.42	501.24	809.18							1310.42	1.81	0.00	0.00	0.00	2.93	2.93	4.74			
BTPS (Manuguru New Project) - Unit 1	2	1,080.00	70.55	761.94	1301.35	1301.35	334.09	307.51							641.60	2.57	0.00	0.00	0.00	2.36	2.36	4.93			
BTPS (Manuguru New Project) - Unit 2	2	800.00	70.55	564.40	1301.35	1301.35	334.09	307.52							641.61	2.57	0.00	0.00	0.00	2.36	2.36	4.93			
BTPS (Manuguru New Project) - Unit 3	2		70.55		1301.35	1301.35	334.09	307.53							641.62	2.57	0.00	0.00	0.00	2.36	2.36	4.93			
BTPS (Manuguru New Project) - Unit 4	2		70.55		1301.35	1301.35	334.09	307.55							641.63	2.57	0.00	0.00	0.00	2.36	2.36	4.93			
KTPS VII	2		70.55		3992.80	3992.80	732.29	961.87							1694.15	1.83	0.00	0.00	0.00	2.41	2.41	4.24			
YTPS - I	2		70.55		1298.95	1298.95	282.76	372.81							655.58	2.18	0.00	0.00	0.00	2.87	2.87	5.05			
Yadradri - TPS - II					638.83	638.83	141.38	183.36							324.74	2.21	0.00	0.00	0.00	2.87	2.87	5.08			
<b>TOTAL THERMAL</b>		<b>7572.50</b>		<b>3359.94</b>	<b>21005.51</b>	<b>20685.78</b>	<b>4004.21</b>	<b>5462.82</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9467.03</b>	<b>1.94</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.64</b>	<b>2.64</b>	<b>4.58</b>				
MACHKUND PH TS Share	1	45.27	70.55	31.94	0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TUNGBHADRA PH TS Share	1	15.52	70.55	10.95	0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
USL	1			0.00	0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
LSR	1			0.00	0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DONKARAYI	1			0.00	0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SSLM	1			0.00	0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NSPH	1	815.60	70.55	575.41	0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NSRCPH	1			0.00	1561.74	1561.74	225.69								225.69	1.45	0.00	0.00	0.00	0.00	1.45	1.45	1.45		
NSLCPH	1	60.00	70.55	42.33	0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
POCHAMPAD PH	1	27.00	70.55	19.05	114.89	114.89	16.60								16.60	1.45	0.00	0.00	0.00	0.00	1.45	1.45	1.45		
NIZAMSAGAR PH	1	10.00	70.55	7.06	48.56	48.56	17.97								17.97	3.70	0.00	0.00	0.00	0.00	3.70	3.70	3.70		
PABM	1			0.00	12.16	12.16	6.65								6.65	5.47	0.00	0.00	0.00	0.00	5.47	5.47	5.47		
MINI HYDRO&OTHERS	1			0.00	0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SINGUR	1	15.00	70.55	10.58	0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SSLM LCPH	1	900.00	70.55	634.95	26.98	26.98	9.98								9.98	3.70	0.00	0.00	0.00	0.00	3.70	3.70	3.70		
Nagarjunasagar Tail Pond Dam Power House	1			0.00	1450.73	1450.73	324.18								324.18	2.23	0.00	0.00	0.00	0.00	2.23	2.23	2.23		
Priyadarshini Jurala Hydro Electric Project- AP Share	1	234.00	50.00	117.00	0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Lower Jurala Hydro Electric Project	1	240.00	70.55	169.32	119.74	119.74	43.37								43.37	3.62	0.00	0.00	0.00	0.00	3.62	3.62	3.62		
POCHAMPAD Stage-II	1	9.00	70.55	6.35	252.82	252.82	183.08								183.08	7.24	0.00	0.00	0.00	0.00	7.24	7.24	7.24		
PULICHINTAL(New Project)	1	120.00	70.55	84.66	11.68	11.68	6.55								6.55	5.61	0.00	0.00	0.00	0.00	5.61	5.61	5.61		
Ramagin Wind Mills	1			0.00	218.20	218.20	87.39								87.39	4.01	0.00	0.00	0.00	0.00	4.01	4.01	4.01		
Pochampad Stage-IV	1			0.00	0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					0.00	0.00	8.02								8.02	33.87	0.00	0.00	0.00	0.00	33.87	33.87	33.87		
					0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>TOTAL HYDRO</b>		<b>2491.39</b>		<b>1709.59</b>	<b>3819.87</b>	<b>3819.87</b>	<b>929.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>929.50</b>	<b>2.43</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.43</b>	<b>2.43</b>	<b>2.43</b>			
<b>TOTAL TSGENCO</b>		<b>10063.89</b>		<b>5069.53</b>	<b>24825.38</b>	<b>24505.65</b>	<b>4933.71</b>	<b>5462.82</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10396.53</b>	<b>2.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.23</b>	<b>2.23</b>	<b>4.24</b>				
<b>Central Generating Stations</b>																									
<b>NTPC</b>																									
<b>NTPC (SR)</b>																									
NTPC (SR)	2	2100.00	11.44	240.31	1892.26	1892.26	137.76	529.83							667.59	0.73	0.00	0.00	0.00	2.80	3.53	3.53			
NTPC (SR) Stage III	2	500.00	12.06	60.32	457.80	457.80	38.10	126.28							164.38	0.83	0.00	0.00	0.00	2.76	3.59	3.59			
<b>Total NTPC(SR)</b>		<b>2600.00</b>		<b>300.63</b>	<b>2350.06</b>	<b>2350.06</b>	<b>175.85</b>	<b>656.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>831.97</b>	<b>0.75</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.79</b>	<b>3.54</b>	<b>3.54</b>				
<b>NTPC (ER)</b>																									
Farakka	2				0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Kahalgaon	2			0.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Talcher - Stage 1	2			0.00	0.00	0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Talcher Stage 2	2	2000.00	7.51	150.13	1126.86	1126.86	80.46	197.09							277.55	0.71	0.00	0.00	0.00	1.75	2.46	2.46			
Others	2			0.00	0.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Total NTPC(ER)</b>		<b>2000.00</b>		<b>150.13</b>	<b>1126.86</b>	<b>1126.86</b>	<b>80.46</b>	<b>197.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>277.55</b>	<b>0.71</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.75</b>	<b>2.46</b>	<b>2.46</b>				
<b>Total NTPC</b>		<b>4600.00</b>		<b>450.76</b>	<b>3476.92</b>	<b>3476.92</b>	<b>256.31</b>	<b>853.20</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<													



Generating Station	Plant Type Must Run = 1 Others = 2	Plant Capacity	DISCOM's share	DISCOM's share	Availability and Dispatch (MU)		Cost (Rs. Crs.)						Unit Cost (Rs. / kWh)					
							Fixed	Variable	Incentive	Income Tax	Others	Total	Fixed	Incentives	Income Tax	Others	Variable	Total
<b>NPC</b>																		
NPC-MAPS	1	440.00	3.63	15.96	39.81	39.81	0.00	10.12					10.12	0.00	0.00	0.00	2.54	2.54
NPC-Kaiga unit I	1	440.00	11.21	49.33	301.15	301.15	0.00	104.87					104.87	0.00	0.00	0.00	3.48	3.48
NPC-Kaiga unit II	1	440.00	11.89	52.34	326.32	326.32	0.00	113.63					113.63	0.00	0.00	0.00	3.48	3.48
NPC- Kudankulam					19.67	19.67	0.00	8.18					8.18					
Kudankulam (KKNPP) Unit-II					236.20	236.20	0.00	98.22					98.22					
<b>Total NPC</b>		<b>1320.00</b>		<b>117.62</b>	<b>923.15</b>	<b>923.15</b>	<b>0.00</b>	<b>335.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>335.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.63</b>	<b>3.63</b>
<b>NTPC - Simhadri</b>																		
NTPC Simhadri Stage I	2	1000.00	16.10	161.00	2839.07	2834.96	255.16	855.59					1110.75	0.90	0.00	0.00	3.02	3.92
NTPC Simhadri Stage II	2	1000.00	38.02	380.19	1362.62	1362.62	195.97	409.06					605.03	1.44	0.00	0.00	3.00	4.44
<b>Total NTPC- Simhadri</b>		<b>2000.00</b>		<b>541.19</b>	<b>4201.70</b>	<b>4197.58</b>	<b>451.13</b>	<b>1264.65</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1715.78</b>	<b>1.07</b>	<b>0.00</b>	<b>0.00</b>	<b>3.01</b>	<b>4.09</b>
<b>CGS - New</b>																		
Vallur Thermal Power Plant	2	1500.00	5.16	77.46	571.78	49.30	101.49	19.04					120.53	20.59	0.00	0.00	3.86	24.45
Tuticorin/NLC Tamilnadu Power Ltd	2	1000.00	10.68	106.81	1012.83	91.89	157.33	40.28					197.61	17.12	0.00	0.00	4.38	21.51
Kudigi	2	2400.00	4.96	119.05	1453.59	127.14	458.21	49.75					507.96	36.04	0.00	0.00	3.91	39.95
NCE - Bundled power NVVNL (Coal) JNNM Ph2				0.00	983.97	983.97	136.98	352.11					489.09	1.39	0.00	0.00	3.58	4.97
NCE-Bundled Power (NVVNL) coal	1				237.30	237.30	0.00	153.45					153.45	0.00	0.00	0.00	6.47	6.47
Telangana STPP (phase I)					5818.46	5818.46	1189.83	1195.10					2384.93	2.04	0.00	0.00	2.05	4.10
					0.00	0.00		0.00					0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL CGS</b>		<b>14290.00</b>		<b>1529.99</b>	<b>19056.40</b>	<b>16013.11</b>	<b>2811.70</b>	<b>4350.41</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7162.11</b>	<b>1.76</b>	<b>0.00</b>	<b>0.00</b>	<b>2.72</b>	<b>4.47</b>
<b>APGPCL</b>																		
APGPCL I - Allocated capacity	2	100.00	4.71	4.71	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
APGPCL I - Unutilised capacity	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
APGPCL II - Allocated capacity	2	172.00	7.32	12.58	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
APGPCL II - Unutilised capacity	2			0.00	0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
<b>Total APGPCL</b>		<b>272.00</b>		<b>17.29</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>IPPS</b>																		
Thermal Power Tech Unit I	2				1501.24	1501.24	224.05	347.42			42.67		614.14	1.49	0.00	0.00	2.31	4.09
Thermal Power Tech Unit II	2				3175.75	368.75	800.76	142.28					943.04	21.72	0.00	0.00	3.86	25.57
	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
	2				0.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL IPPS</b>		<b>0.00</b>		<b>0.00</b>	<b>4676.98</b>	<b>1869.99</b>	<b>1024.81</b>	<b>489.70</b>	<b>0.00</b>	<b>0.00</b>	<b>42.67</b>	<b>0.00</b>	<b>1557.17</b>	<b>5.48</b>	<b>0.00</b>	<b>0.00</b>	<b>2.62</b>	<b>8.33</b>
<b>NCE</b>																		
NCE - Bio-Mass	1			0.00	20.13	20.13		14.96					14.96	0.00	0.00	0.00	7.44	7.44
NCE - Bagasse	1			0.00	0.00	0.00		0.00					0.00	0.00	0.00	0.00	0.00	0.00
NCE - Municipal Waste to Energy	1			0.00	143.37	143.37		112.40					112.40	0.00	0.00	0.00	7.84	7.84
NCE - Industrial Waste based power project	1			0.00	46.24	46.24		33.36					33.36	0.00	0.00	0.00	7.22	7.22
NCE - Wind Power	1			0.00	273.83	273.83		118.02					118.02	0.00	0.00	0.00	4.31	4.31
NCE - Mini Hydel	1			0.00	0.00	0.00		0.00					0.00	0.00	0.00	0.00	0.00	0.00
NCE-Solar	1			0.00	3424.50	3424.50		2048.20					2048.20	0.00	0.00	0.00	5.98	5.98
NCE - Bundled Power NVVNL (solar) JNNM Ph 1	1			0.00	26.26	26.26		28.07					28.07	0.00	0.00	0.00	10.69	10.69
NCE - Bundled Power (Solar) (NTPC 400 MW)				0.00	564.32	564.32		267.44					267.44	0.00	0.00	0.00	4.74	4.74
NTPC CPSU Ph-II Tr III (735 MW)					356.69	356.69		87.39					87.39	0.00	0.00	0.00	2.45	2.45
SECI 400 MW					558.75	558.75		155.33					155.33	0.00	0.00	0.00	2.78	2.78
NTPC CPSU - 1692 MW					1984.81	1984.81		560.29					560.29	0.00	0.00	0.00	2.82	2.82
SECI 1000 MW					607.89	607.89		148.53					148.53	0.00	0.00	0.00	2.44	2.44
<b>TOTAL NCE</b>		<b>0.00</b>		<b>0.00</b>	<b>8006.78</b>	<b>8006.78</b>	<b>0.00</b>	<b>3574.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3574.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.46</b>	<b>4.46</b>



Year 5 2023-24

S. No.	Discom Name	Details link	Quantity (MU)	Cost (Rs Crores)	Rate (Rs/kWh)	Remarks
1	TSSPDCL		814.52	250.96	3.08	
2	TSNPDCL		-814.52	-250.96	3.08	
3					0.00	
4					0.00	
5					0.00	
6					0.00	
<b>Total</b>			<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	

Generating Station	PLF (%)	Variable Cost (Rs. /	Gross Energy Availability (MU)													Yearly Auxiliary	Net Energy Availability
			April	May	June	July	August	September	October	November	December	January	February	March	Total		

2023-24

Generating Station	PLF (%)	Variable Cost (Rs. /	Gross Energy Availability (MU)													Yearly Auxiliary	Net Energy Availability	
			April	May	June	July	August	September	October	November	December	January	February	March	Total			
<b>TSGENCO</b>																		
<b>Thermal</b>																		
VTPS I																	0.00	0.00
VTPS II																	0.00	0.00
VTPS III																	0.00	0.00
VTPS IV																	0.00	0.00
RTPP I																	0.00	0.00
RTPP Stage-II																	0.00	0.00
RTPP Stage-III																	0.00	0.00
KTPS A			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KTPS B			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KTPS C			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KTPS D			197.86	204.45	197.86	165.80	95.53	187.32	204.45	197.86	204.45	204.45	191.27	204.45	2255.76	2255.76		
KTPS Stage VI			198.81	205.44	198.81	205.44	205.44	198.81	205.44	198.81	132.54	145.79	192.19	205.44	2292.97	2292.97		
RTS B			22.34	23.09	22.34	23.09	23.09	22.34	23.09	11.18	23.09	23.09	21.60	23.09	261.46	261.46		
RTS																	0.00	0.00
Kakatiya Thermal Power Plant Stage I			187.95	194.21	187.95	194.21	194.21	187.95	194.21	187.95	194.21	194.21	181.68	194.21	2292.93	2292.93		
Kakatiya Thermal Power Plant Stage II			258.54	267.16	0.00	137.89	267.16	258.54	267.16	258.54	267.16	267.16	249.93	267.16	2766.42	2766.42		
BTPS (Manuguru New Project) - Unit 1			109.75	113.41	109.75	98.36	109.65	109.75	113.41	109.75	113.41	94.60	106.09	113.41	1301.35	1301.35		
BTPS (Manuguru New Project) - Unit 2			109.75	113.41	109.75	98.36	109.65	109.75	113.41	109.75	113.41	94.60	106.09	113.41	1301.35	1301.35		
BTPS (Manuguru New Project) - Unit 3			109.75	113.41	109.75	98.36	109.65	109.75	113.41	109.75	113.41	94.60	106.09	113.41	1301.35	1301.35		
BTPS (Manuguru New Project) - Unit 4			109.75	113.41	109.75	98.36	109.65	109.75	113.41	109.75	113.41	94.60	106.09	113.41	1301.35	1301.35		
KTPS VII			327.28	338.19	327.28	338.19	338.19	327.28	338.19	327.28	338.19	338.19	316.37	338.19	3992.80	3992.80		
YTPS - I			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	330.06	330.06	308.77	330.06	1298.95	1298.95	
Yadradri - TPS - II			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	308.77	330.06	638.83	638.83		
<b>TOTAL THERMAL</b>			<b>1631.78</b>	<b>1686.18</b>	<b>1373.24</b>	<b>1458.08</b>	<b>1562.22</b>	<b>1621.24</b>	<b>1686.18</b>	<b>1620.61</b>	<b>1943.34</b>	<b>1881.37</b>	<b>2194.94</b>	<b>2346.31</b>	<b>21005.51</b>	<b>0.00</b>	<b>21005.51</b>	
MACHKUND PH TS Share																0.00	0.00	
TUNGBHADRA PH TS Share																0.00	0.00	
USL																0.00	0.00	
LSR																0.00	0.00	
DONKARAYI																0.00	0.00	
SSLM																0.00	0.00	
NSPH			23.78	18.66	27.80	127.22	365.74	272.10	380.63	180.34	18.64	32.22	52.97	61.65	1561.74	1561.74		
NSRCPH																0.00	0.00	
NSLCPH			1.75	1.37	2.04	9.36	26.91	20.02	28.00	13.27	1.37	2.37	3.90	4.54	114.89	114.89		
POCHAMPAD PH			2.35	-0.03	0.10	2.44	7.11	10.54	11.92	1.28	-0.03	3.91	3.66	5.30	48.56	48.56		
NIZAMSAGAR PH			0.33	-0.02	-0.01	0.52	0.71	2.29	3.55	0.20	0.79	1.18	0.69	1.93	12.16	12.16		
PABM																0.00	0.00	
MINI HYDRO&OTHERS																0.00	0.00	
SINGUR			1.30	-0.01	0.06	1.36	3.95	5.86	6.62	0.71	-0.02	2.17	2.04	2.95	26.98	26.98		
SSLM LCPH			12.99	-0.03	33.73	199.60	331.50	284.34	352.81	106.65	36.54	61.91	31.12	-0.43	1450.73	1450.73		
Nagarjunasagar Tail Pond Dam Power House																0.00	0.00	
Phydarshini Jurala Hydro Electric Project- AP Share			-0.05	-0.06	15.27	8.31	28.44	32.34	29.54	4.23	1.91	-0.07	-0.06	-0.06	119.74	119.74		
Lower Jurala Hydro Electric Project			0.01	-0.16	19.01	24.09	45.13	84.41	66.87	9.07	4.01	0.31	-0.09	0.15	252.82	252.82		
POCHAMPAD Stage-II			0.00	0.00	0.00	0.97	2.16	4.14	4.41	0.00	0.00	0.00	0.00	0.00	11.68	11.68		
PULICHINTAL (New Project)			6.03	1.81	0.23	21.11	35.84	40.98	43.83	27.04	10.09	8.98	11.91	10.37	218.20	218.20		
Ramagiri Wind Mills																0.00	0.00	
Pochampad Stage-IV																0.00	0.00	
Mini Hydel & Others (Peddapalli, Palair)			0.25	-0.02	-0.02	-0.02	0.36	0.40	0.39	0.19	0.01	0.18	0.16	0.49	2.37	2.37		
<b>TOTAL HYDRO</b>			<b>48.73</b>	<b>21.51</b>	<b>98.21</b>	<b>394.95</b>	<b>847.84</b>	<b>767.41</b>	<b>928.57</b>	<b>342.98</b>	<b>73.31</b>	<b>113.17</b>	<b>106.31</b>	<b>86.87</b>	<b>3819.87</b>	<b>0.00</b>	<b>3819.87</b>	
<b>TOTAL TSGENCO</b>			<b>1680.51</b>	<b>1707.70</b>	<b>1471.44</b>	<b>1853.04</b>	<b>2410.06</b>	<b>2378.65</b>	<b>2614.76</b>	<b>1963.59</b>	<b>2016.66</b>	<b>1994.54</b>	<b>2301.25</b>	<b>2433.18</b>	<b>24825.38</b>	<b>0.00</b>	<b>24825.38</b>	
<b>Central Generating Stations</b>																		
<b>NTPC</b>																		
<b>NTPC (SR)</b>																		
NTPC (SR)			162.53	167.95	162.53	167.95	167.95	162.53	151.54	141.36	136.20	167.95	143.76	160.01	1892.26	1892.26		
NTPC (SR) Stage III			41.09	42.46	41.09	42.46	42.46	41.09	42.46	41.09	42.46	8.74	29.92	42.46	457.80	457.80		
<b>Total NTPC(SR)</b>			<b>203.62</b>	<b>210.41</b>	<b>203.62</b>	<b>210.41</b>	<b>210.41</b>	<b>203.62</b>	<b>194.00</b>	<b>182.45</b>	<b>178.66</b>	<b>176.69</b>	<b>173.68</b>	<b>202.47</b>	<b>2350.06</b>	<b>0.00</b>	<b>2350.06</b>	

Generating Station	PLF (%)	Variable Cost (Rs. /	Gross Energy Availability (MU)													Yearly Auxiliary	Net Energy Availability	
			April	May	June	July	August	September	October	November	December	January	February	March	Total			
<b>NTPC (ER)</b>																		
Farakka			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kahalgaoon			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Talcher - Stage 1			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Talcher Stage 2			98.37	101.13	71.69	87.33	85.91	85.99	101.07	97.28	100.71	100.95	95.03	101.41	1126.86		1126.86	1126.86
Others															0.00		0.00	0.00
<b>Total NTPC(ER)</b>			<b>98.37</b>	<b>101.13</b>	<b>71.69</b>	<b>87.33</b>	<b>85.91</b>	<b>85.99</b>	<b>101.07</b>	<b>97.28</b>	<b>100.71</b>	<b>100.95</b>	<b>95.03</b>	<b>101.41</b>	<b>1126.86</b>	<b>0.00</b>	<b>1126.86</b>	<b>1126.86</b>
NNTPP			25.72	26.68	25.72	26.25	26.25	25.37	15.02	12.23	15.02	19.96	24.76	26.33	269.32		269.32	269.32
<b>Total NTPC</b>			<b>301.99</b>	<b>311.54</b>	<b>275.31</b>	<b>297.74</b>	<b>296.32</b>	<b>289.61</b>	<b>295.07</b>	<b>279.73</b>	<b>279.37</b>	<b>277.64</b>	<b>268.71</b>	<b>303.88</b>	<b>3746.24</b>	<b>0.00</b>	<b>3476.92</b>	<b>3476.92</b>
<b>NLC TS-II</b>																		
Stage-I			2.21	2.30	2.21	1.63	2.30	1.50	2.23	1.49	2.23	2.25	2.15	2.30	24.80		24.80	24.80
Stage-II			2.94	3.02	2.27	3.02	2.37	2.94	2.37	2.89	2.27	2.70	2.85	3.04	32.67		32.67	32.67
NNTPP			25.72	26.68	25.72	26.25	26.25	25.37	15.02	12.23	15.02	19.96	24.76	26.33	269.32		269.32	269.32
<b>Total NLC</b>			<b>30.87</b>	<b>5.32</b>	<b>4.49</b>	<b>4.65</b>	<b>4.66</b>	<b>4.44</b>	<b>4.60</b>	<b>4.38</b>	<b>4.50</b>	<b>4.96</b>	<b>5.00</b>	<b>5.33</b>	<b>326.78</b>	<b>0.00</b>	<b>326.78</b>	<b>326.78</b>
<b>NPC</b>																		
<b>Kudankulam (KKNPP) Unit-II</b>			<b>0.00</b>	<b>0.00</b>	<b>19.68</b>	<b>24.41</b>	<b>24.41</b>	<b>23.62</b>	<b>24.41</b>	<b>23.62</b>	<b>24.41</b>	<b>24.41</b>	<b>22.83</b>	<b>24.41</b>	<b>236.20</b>		<b>236.20</b>	<b>236.20</b>
NPC-MAPS			3.71	3.90	3.71	-0.66	2.54	3.71	3.90	3.71	3.90	3.60	3.90	39.81		39.81	39.81	
NPC-Kaiga unit I			26.04	27.01	26.04	27.01	27.01	13.02	22.64	26.04	27.01	27.01	25.27	27.01	301.15		301.15	301.15
NPC-Kaiga unit II			15.19	28.74	27.70	28.74	28.74	27.70	28.74	27.70	28.74	28.74	26.87	28.74	326.32		326.32	326.32
Kudankulam (KKNPP) Unit-II			0.00	0.00	19.68	24.41	24.41	23.62	24.41	23.62	24.41	24.41	22.83	24.41	236.20		236.20	236.20
<b>Total NPC</b>			<b>44.95</b>	<b>59.65</b>	<b>77.14</b>	<b>79.50</b>	<b>82.69</b>	<b>68.06</b>	<b>79.68</b>	<b>81.06</b>	<b>84.05</b>	<b>84.05</b>	<b>78.58</b>	<b>84.05</b>	<b>1139.69</b>	<b>0.00</b>	<b>1139.69</b>	<b>1139.69</b>
<b>NTPC - Simhadri</b>																		
NTPC Simhadri Stage I			245.10	253.27	245.10	253.27	253.27	245.10	253.27	159.31	196.08	253.27	228.76	253.27	2839.07		2839.07	2839.07
NTPC Simhadri Stage II			116.80	120.69	85.65	93.44	120.69	116.80	120.69	116.80	120.69	120.69	109.01	120.69	1362.62		1362.62	1362.62
<b>Total NTPC- Simhadri</b>			<b>361.90</b>	<b>373.96</b>	<b>330.75</b>	<b>346.71</b>	<b>373.96</b>	<b>361.90</b>	<b>373.96</b>	<b>276.11</b>	<b>316.77</b>	<b>373.96</b>	<b>337.77</b>	<b>373.96</b>	<b>4201.70</b>	<b>0.00</b>	<b>4201.70</b>	<b>4201.70</b>
<b>CGS - New</b>																		
Vallur Thermal Power Plant			49.30	50.95	49.30	38.61	38.01	49.30	50.95	49.30	48.15	50.95	46.00	50.95	571.78		571.78	571.78
Tuticorin/NLC Taminadu Power Ltd			91.89	91.89	67.33	51.82	66.70	91.89	91.89	91.89	91.89	91.89	91.89	91.89	1012.83		1012.83	1012.83
NPC-Kudankulam			2.03	2.10	2.03	2.10	2.10	2.03	2.10	2.03	1.02	0.00	0.03	2.10	19.67		19.67	19.67
Kudigi			127.14	131.38	84.76	129.90	87.59	121.47	131.38	127.14	131.38	131.38	118.67	131.38	1453.59		1453.59	1453.59
NCE-Bundled Power (NVVNL) coal			80.66	83.35	80.66	83.35	83.35	80.66	83.35	80.66	83.35	80.66	83.35	77.88	983.97		983.97	983.97
NCE - Bundled Power (Coal) ( NTPC 200 MW)			19.78	19.78	19.78	19.78	19.78	19.78	19.78	19.78	19.78	19.78	19.78	19.78	237.30		237.30	237.30
Neyveli new unit - 1			2.59	2.66	2.59	2.67	2.66	1.77	1.38	2.32	2.53	2.59	2.42	2.69	28.75		28.75	28.75
Neyveli new unit - 2			2.09	1.09	1.63	1.54	2.16	2.09	2.16	1.05	1.37	1.85	2.01	2.15	21.18		21.18	21.18
Telangana STPP (phase I)			272.31	281.39	272.31	562.78	562.78	544.63	562.78	544.63	562.78	562.78	526.48	562.78	5818.46		5818.46	5818.46
<b>TOTAL CGS</b>			<b>1090.73</b>	<b>1110.13</b>	<b>971.77</b>	<b>1034.37</b>	<b>1035.38</b>	<b>1069.36</b>	<b>1112.97</b>	<b>992.32</b>	<b>1040.47</b>	<b>1098.18</b>	<b>1024.53</b>	<b>1126.89</b>	<b>19561.92</b>	<b>0.00</b>	<b>13186.91</b>	<b>13186.91</b>



Generating Station	Gross Energy Availability (MU)													Total
	April	May	June	July	August	September	October	November	December	January	February	March		
<b>2023-24</b>														
Generating Station	April	May	June	July	August	September	October	November	December	January	February	March	Total	
<b>TSGENCO</b>														
<b>Thermal</b>														
VTPS I													0.00	
VTPS II													0.00	
VTPS III													0.00	
VTPS IV													0.00	
RTPP I													0.00	
RTPP Stage-II													0.00	
RTPP Stage-III													0.00	
KTPS A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
KTPS B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
KTPS C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
KTPS D	197.86	204.45	197.86	165.80	95.53	187.32	204.45	197.86	204.45	204.45	191.27	204.45	2255.76	
KTPS Stage VI	198.81	205.44	198.81	205.44	205.44	198.81	205.44	198.81	132.54	145.79	192.19	205.44	2292.97	
RTS B	22.34	23.09	22.34	23.09	23.09	22.34	23.09	11.18	23.09	23.09	21.60	23.09	261.46	
NTS													0.00	
Kakatiya Thermal Power Plant Stage I	187.95	194.21	187.95	0.00	93.01	187.95	194.21	163.62	194.21	194.21	181.68	194.21	1973.21	
Kakatiya Thermal Power Plant Stage II	258.54	267.16	0.00	137.89	267.16	258.54	267.16	258.54	267.16	267.16	249.93	267.16	2769.42	
BTPS (Manuguru New Project) - Unit 1	109.75	113.41	109.75	98.36	109.65	109.75	113.41	109.75	113.41	94.60	106.09	113.41	1301.35	
BTPS (Manuguru New Project) - Unit 2	109.75	113.41	109.75	98.36	109.65	109.75	113.41	109.75	113.41	94.60	106.09	113.41	1301.35	
BTPS (Manuguru New Project) - Unit 3	109.75	113.41	109.75	98.36	109.65	109.75	113.41	109.75	113.41	94.60	106.09	113.41	1301.35	
BTPS (Manuguru New Project) - Unit 4	109.75	113.41	109.75	98.36	109.65	109.75	113.41	109.75	113.41	94.60	106.09	113.41	1301.35	
KTPS VII	327.28	338.19	327.28	338.19	338.19	327.28	338.19	327.28	338.19	338.19	316.37	338.19	3992.80	
YTPS - I	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	330.05	330.05	308.77	330.05	1298.95	
Yadradri - TPS - II	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	308.77	330.06	330.06	638.83	
<b>TOTAL THERMAL</b>	<b>1631.78</b>	<b>1686.18</b>	<b>1373.24</b>	<b>1263.87</b>	<b>1461.02</b>	<b>1621.24</b>	<b>1686.18</b>	<b>1696.29</b>	<b>1943.34</b>	<b>1881.37</b>	<b>2194.94</b>	<b>2346.31</b>	<b>20685.78</b>	
MACHKUND PH TS Share													0.00	
TUNGBHADRA PH TS Share													0.00	
LSL													0.00	
LSR													0.00	
DONKARAYI													0.00	
SSLM													0.00	
NSPH	23.78	18.66	27.80	127.22	365.74	272.10	380.63	180.34	18.64	32.22	52.97	61.65	1561.74	
NSRCPH													0.00	
NSLCPH	1.75	1.37	2.04	9.36	26.91	20.02	28.00	13.27	1.37	2.37	3.90	4.54	114.95	
POCHAMPAD PH	2.35	-0.03	0.10	2.44	7.11	10.54	11.92	1.28	-0.03	3.91	3.66	5.30	48.58	
NIZAMSAGAR PH	0.33	-0.02	-0.01	0.52	0.71	2.29	3.55	0.20	0.79	1.18	0.69	1.93	12.16	
PABM													0.00	
MINI HYDRO&OTHERS													0.00	
SINGUR	1.30	-0.01	0.06	1.36	3.95	5.86	6.62	0.71	-0.02	2.17	2.04	2.95	26.98	
SSLM LCPH	12.99	-0.03	33.73	199.60	331.50	284.34	352.81	106.65	38.54	61.91	31.12	-0.43	1450.73	
Nagarjunasagar Tail Pond Dam Power House													0.00	
Priyadarshini Jurala Hydro Electric Project- AP Share	-0.05	-0.06	15.27	8.31	28.44	32.34	29.54	4.23	1.91	-0.07	-0.06	-0.06	119.74	
Lower Jurala Hydro Electric Project	0.01	-0.18	19.01	24.09	45.13	84.41	66.87	9.07	4.01	0.31	-0.09	0.15	252.82	
POCHAMPAD Stage-II	0.00	0.00	0.00	0.97	2.18	4.14	4.41	0.00	0.00	0.00	0.00	0.00	11.85	
PULICHINTAL(New Project)	6.03	1.81	0.23	21.11	35.84	40.98	43.83	27.04	10.09	8.98	11.91	10.37	218.20	
Ramagiri Wind Mills													0.00	
Pochampad Stage-IV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mini Hydel & Others (Peddapalli, Palair)	0.25	-0.02	-0.02	-0.02	0.36	0.40	0.39	0.19	0.01	0.18	0.16	0.49	2.37	
													0.00	
													0.00	
													0.00	
<b>TOTAL HYDRO</b>	<b>48.73</b>	<b>21.51</b>	<b>98.21</b>	<b>394.95</b>	<b>847.84</b>	<b>757.41</b>	<b>928.57</b>	<b>342.98</b>	<b>73.31</b>	<b>113.17</b>	<b>106.31</b>	<b>86.87</b>	<b>3819.87</b>	
<b>TOTAL TSGENCO</b>	<b>1680.51</b>	<b>1707.70</b>	<b>1471.44</b>	<b>1658.83</b>	<b>2308.86</b>	<b>2378.65</b>	<b>2614.76</b>	<b>1939.27</b>	<b>2016.66</b>	<b>1994.54</b>	<b>2301.25</b>	<b>2433.18</b>	<b>24505.65</b>	





Generating Station	Gross Energy Availability (MU)													Total
	April	May	June	July	August	September	October	November	December	January	February	March		
<b>NCE</b>														
NCE - Bio-Mass	1.93	0.78	0.00	0.88	0.00	0.00	2.91	2.95	1.57	3.24	3.19	2.68	20.13	
NCE - Bagasse	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NCE - Municipal Waste to Energy	11.78	12.18	11.78	12.18	12.18	11.78	12.18	11.78	12.18	12.18	11.00	12.18	143.37	
NCE - Industrial Waste based power project	3.93	4.30	4.63	4.68	4.68	4.68	4.67	0.16	0.62	5.17	4.72	4.00	46.24	
NCE - Wind Power	14.95	20.45	29.68	43.19	36.66	23.82	11.60	23.33	19.25	17.75	20.12	13.03	273.83	
NCE - Mini Hydel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NCE - NCL Energy Ltd													0.00	
NCE-Solar	326.29	305.32	323.76	204.22	258.84	262.96	279.83	242.18	265.70	282.79	348.63	323.99	3424.50	
NCE - Bundled Power NVVNL (solar) JNNSM Ph 1	2.87	2.34	2.30	1.42	1.62	2.03	1.79	1.20	1.47	2.30	3.29	3.63	26.26	
NCE - Bundled Power (Solar) (NTPC 400 MW)	52.77	59.98	49.11	34.64	43.62	43.62	46.50	37.36	46.11	48.23	55.87	53.70	564.32	
NTPC CPSU - 1692 MW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.87	73.23	73.23	66.14	73.23	356.69	
SECI 400 MW	45.92	47.46	45.92	47.46	47.46	45.92	47.46	45.92	47.46	47.46	42.86	47.46	558.75	
Solar bundled under phase II	163.13	168.57	163.13	168.57	168.57	163.13	168.57	163.13	168.57	168.57	152.26	168.57	1984.81	
NCE - Others	0.00	0.00	0.00	0.00	0.00	0.00	0.00	120.77	124.80	124.80	112.72	124.80	607.89	
<b>TOTAL NCEs</b>	<b>358.89</b>	<b>343.03</b>	<b>369.85</b>	<b>265.14</b>	<b>312.38</b>	<b>303.24</b>	<b>311.18</b>	<b>280.42</b>	<b>299.32</b>	<b>321.12</b>	<b>387.66</b>	<b>355.87</b>	<b>8006.78</b>	
<b>OTHERS</b>														
Srivathsa													0.00	
LVS													0.00	
Vishakapatnam Steel Plant													0.00	
NB Ferro Alloys													0.00	
Singareni I & II	563.01	76.70	272.63	0.00	0.00	110.03	140.28	0.00	354.43	430.47	101.12	581.78	2630.44	
Thermal Power Tech	130.03	134.36	130.03	134.36	134.36	130.03	134.36	76.19	107.44	134.36	121.36	134.36	1501.24	
CSPGCL	394.66	407.81	394.66	407.81	407.81	394.66	407.81	394.66	407.81	407.81	381.50	407.81	4814.85	
Thermal Power Tech Unit II	275.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.69	368.75	
													0.00	
													0.00	
													0.00	
													0.00	
<b>TOTAL OTHERS</b>	<b>1362.76</b>	<b>618.87</b>	<b>797.31</b>	<b>542.18</b>	<b>542.18</b>	<b>634.72</b>	<b>682.45</b>	<b>470.85</b>	<b>869.69</b>	<b>972.64</b>	<b>603.98</b>	<b>1217.64</b>	<b>9315.28</b>	
<b>MARKET</b>														
PTC													0.00	
RCL and Short-Term Sources(I/G Wells,Kesoram)													0.00	
NPDCL													0.00	
SPDCL													0.00	
UI													0.00	
Other Short Term Sources													0.00	
D-D Sales/Purchase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	95.64	
Interest on Pension Bonds	178.31	429.63	352.59	270.71	29.74	-1.80	45.17	54.49	-71.94	-201.03	-92.56	-178.80	814.52	
STOA													0.00	
Reactive													0.00	
Wheeling KPTCL													0.00	
Wheeling Tantransco/Asset Maintenance													0.00	
Conjestion charges													0.00	
													0.00	
													0.00	
													0.00	
<b>TOTAL MARKET</b>	<b>178.31</b>	<b>429.63</b>	<b>352.59</b>	<b>270.71</b>	<b>29.74</b>	<b>-1.80</b>	<b>45.17</b>	<b>54.49</b>	<b>-71.94</b>	<b>-201.03</b>	<b>-92.56</b>	<b>-178.80</b>	<b>910.16</b>	
<b>TOTAL (From All Sources)</b>	<b>4645.49</b>	<b>3935.14</b>	<b>3761.58</b>	<b>3546.77</b>	<b>4036.20</b>	<b>4121.50</b>	<b>4492.32</b>	<b>3469.02</b>	<b>3882.79</b>	<b>3911.24</b>	<b>3968.30</b>	<b>4680.57</b>	<b>59020.29</b>	

Please Note:

Consumer Categories	No of consumers	Energy Charges (Rs/kWh) or (Rs/kVAh)	Demand charges (Rs/kVA/yr)	Demand charges (Rs/HP/yr)	Energy Sales (MVAH)	Connected Load/ Contract Demand (MW)	Connected Load/ Contract Demand (HP)	Energy Charges (Rs Crores)	Demand /Fixed charges (Rs Crores)	Minimum Charges (Rs Crores)	Customer Charges (Rs crores)	Others (Rs Crores)	Gross Tariff Revenue (Rs Crores)	Incentives (Rs. Crs)	Net Revenue from Tariff (Rs. Crores)	Surcharge (Rs.Crs)	Additional Surcharge (Rs.Crs)	Grid Support Charges (Rs. Crs)	Direct	Apportioned	Total Revenue (Net of Incentives) (Rs. Crs)	Remarks	
<b>LT Total - (Existing Categories)</b>	<b>8244739</b>				<b>24947</b>	<b>0.00</b>	<b>10506</b>	<b>6725920</b>	<b>6913.32</b>	<b>259.46</b>	<b>48</b>	<b>403.86</b>	<b>-2.27</b>	<b>7622.03</b>	<b>0</b>	<b>7622.03</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30.38</b>	<b>7652.41</b>	
<b>Category - Domestic (All)</b>	<b>8152298</b>		<b>0.00</b>	<b>0.00</b>	<b>8101.36</b>	<b>0.00</b>	<b>7835.43</b>	<b>0.00</b>	<b>3460.10</b>	<b>0.00</b>	<b>33.94</b>	<b>286.27</b>	<b>-1.43</b>	<b>3778.89</b>	<b>0.00</b>	<b>3778.89</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.87</b>	<b>3788.76</b>	
<b>Cat (A) Domestic - upto 100 units/month</b>	<b>3689626</b>		<b>0.00</b>	<b>0.00</b>	<b>2026.91</b>	<b>0.00</b>	<b>2673.90</b>	<b>0.00</b>	<b>353.98</b>	<b>0.00</b>	<b>33.94</b>	<b>120.53</b>	<b>-1.43</b>	<b>507.02</b>	<b>0.00</b>	<b>507.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.47</b>	<b>509.49</b>	
0 - 50 units	2049911	1.45			1504.52				218.16	0.00	33.94	61.50	-1.43	312.17		312.17						312.17	
51 - 100 units	1639715	2.60			522.39				135.82	0.00		59.03		194.85		194.85						194.85	
<b>Cat (B) (i) Domestic -&gt;100 &amp; =200 units/month</b>	<b>1652337</b>		<b>0.00</b>	<b>0.00</b>	<b>2833.21</b>	<b>0.00</b>	<b>2362.69</b>	<b>0.00</b>	<b>1020.89</b>	<b>0.00</b>	<b>0.00</b>	<b>99.14</b>	<b>0.00</b>	<b>1119.83</b>	<b>0.00</b>	<b>1119.83</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.45</b>	<b>1123.28</b>	
0 - 100 units		3.30			1975.86				652.03	0.00				652.03		652.03						652.03	
101 - 200 units	1652337	4.30			857.35				368.86	0.00		99.14		467.80		467.80						467.80	
<b>Cat (B) (ii) Domestic -&gt;200 units/month</b>	<b>816335</b>		<b>0.00</b>	<b>0.00</b>	<b>3241.24</b>	<b>0.00</b>	<b>2798.83</b>	<b>0.00</b>	<b>2085.43</b>	<b>0.00</b>	<b>0.00</b>	<b>66.61</b>	<b>0.00</b>	<b>2152.84</b>	<b>0.00</b>	<b>2152.84</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.95</b>	<b>2156.79</b>	
0 - 200 units		5.00			1790.97				895.48	0.00				895.48		895.48						895.48	
201 - 300 units	490114	7.20			624.91				449.93	0.00		35.29		485.22		485.22						485.22	
301 - 400 units	156007	8.50			273.16				232.19	0.00		14.94		247.13		247.13						247.13	
401 - 800 units	130259	9.00			335.35				301.82	0.00		12.50		314.32		314.32						314.32	
More than 800 units	40355	9.50			216.85				206.01	0.00		3.87		209.88		209.88						209.88	
<b>Category II (A, B, C &amp; D) - Non-domestic/Commercial</b>	<b>826217</b>				<b>2636</b>	<b>0.00</b>	<b>2473</b>	<b>0</b>	<b>2428.36</b>	<b>171.62</b>	<b>13</b>	<b>54.25</b>	<b>-0.19</b>	<b>2667.19</b>	<b>0.00</b>	<b>2667.19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3.21</b>	<b>2670.40</b>	
<b>Category II - Non-domestic/Commr (A &amp; B)</b>	<b>822313</b>				<b>2632</b>	<b>0.00</b>	<b>2465</b>	<b>0</b>	<b>2423.35</b>	<b>171.07</b>	<b>13</b>	<b>53.96</b>	<b>-0.19</b>	<b>2661.35</b>	<b>0.00</b>	<b>2661.35</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3.20</b>	<b>2664.55</b>	
<b>LT - II (A) Upto 50 units/month</b>	<b>353862</b>		<b>6.00</b>	<b>0</b>	<b>74</b>	<b>0.00</b>	<b>635</b>	<b>0</b>	<b>44.28</b>	<b>32.11</b>	<b>13</b>	<b>19.11</b>	<b>-0.19</b>	<b>108.46</b>	<b>0.00</b>	<b>108.46</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>108.46</b>	
0-50 units	353862	6.00	600.00		73.80				44.28	32.11	13.15	19.11	-0.19	108.46		108.46						108.46	
<b>LT - II (B) &gt;50 Units/month</b>	<b>468451</b>				<b>2558</b>	<b>0.00</b>	<b>1930</b>	<b>0</b>	<b>2379.07</b>	<b>138.96</b>	<b>0</b>	<b>34.85</b>	<b>0.00</b>	<b>2552.88</b>	<b>0.00</b>	<b>2552.88</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2552.88</b>	
0 - 100 units	140724	7.50	720.00		468.51				351.38	13.91		9.29		374.57		374.57						374.57	
101 - 300 units	177023	8.90	720.00		453.72				403.81	26.42		13.81		444.04		444.04						444.04	
301 - 500 units	52003	9.40	720.00		194.31				182.65	13.66		4.06		200.90		200.90						200.90	
>500 units	98701	10.00	720.00		1441.23				1441.23	7.70		7.70		1533.97		1533.97						1533.97	
<b>LT-II (C) Advertising Hoardings</b>	<b>2194</b>				<b>3.68</b>	<b>0.00</b>	<b>6.08</b>	<b>0.00</b>	<b>4.42</b>	<b>0.44</b>	<b>0</b>	<b>0.18</b>	<b>0.00</b>	<b>5.04</b>	<b>0.00</b>	<b>5.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.04</b>	
<b>LT-II(D) Hair Cutting Salons up to 200 units/month</b>	<b>1710</b>				<b>1</b>	<b>0.00</b>	<b>2</b>	<b>0</b>	<b>0.59</b>	<b>0.12</b>	<b>0</b>	<b>0.10</b>	<b>0.00</b>	<b>0.81</b>	<b>0.00</b>	<b>0.81</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.81</b>	
0 - 50 units	905	5.30	720.00		0.68				0.36	0.06		0.05		0.47		0.47						0.47	
51 - 100 units	575	6.60	720.00		0.25				0.17	0.04		0.04		0.24		0.24						0.24	
101 - 200 units	230	7.50	720.00		0.08				0.06	0.02		0.02		0.10		0.10						0.10	
<b>Category III - Industrial</b>	<b>42520</b>				<b>969.35</b>	<b>0.00</b>	<b>0.00</b>	<b>10506.40</b>	<b>645.80</b>	<b>75.65</b>	<b>0.00</b>	<b>16.88</b>	<b>0.17</b>	<b>738.59</b>	<b>0.00</b>	<b>738.59</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.18</b>	<b>739.68</b>	
<b>Category III - Industrial</b>	<b>42520</b>				<b>969.35</b>	<b>0.00</b>	<b>0.00</b>	<b>10506.40</b>	<b>645.80</b>	<b>75.65</b>	<b>0.00</b>	<b>16.88</b>	<b>0.17</b>	<b>738.59</b>	<b>0.00</b>	<b>738.59</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.18</b>	<b>739.68</b>	
Industrial Normal	40193	6.70	720.00		537.31		916.96		614.96	75.65		16.88	0.17	707.66		707.66						707.66	
Pisciculture/Prawn culture									0.00	0.00				0.00		0.00						0.00	
Sugarcane crushing									0.00	0.00				0.00		0.00						0.00	
Poultry farms		6.00	600.00		447.76		52.39		31.43	0.00		0.00		31.43		31.43						31.43	
Mushroom & Rabbit Farms	2727								0.00	0.00				0.00		0.00						0.00	
Seasonal Industries									0.00	0.00				0.00		0.00						0.00	
<b>Category IV - Cottage Industries</b>	<b>4075</b>		<b>240.00</b>	<b>179.10</b>	<b>9.44</b>	<b>0.00</b>	<b>0.00</b>	<b>20530.00</b>	<b>3.78</b>	<b>0.37</b>	<b>0.00</b>	<b>0.22</b>	<b>0.00</b>	<b>4.36</b>	<b>0.00</b>	<b>4.36</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>4.38</b>	
Cat -IV(A) - Cottage Industries	4075	4.00	240.00		179.10		9.44		20530.00	3.78	0.37	0.22	0.00	4.36		4.36						4.36	
Cat-IV(B) Agro Based Activity									0.00	-				0.00		0.00						0.00	
<b>Category V (A&amp;B) - Agriculture</b>	<b>1115775</b>				<b>240</b>	<b>12638</b>	<b>0.00</b>	<b>0</b>	<b>5522130</b>	<b>1.26</b>	<b>0.01</b>	<b>0</b>	<b>40.10</b>	<b>-1.33</b>	<b>40.03</b>	<b>0</b>	<b>40.03</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15.39</b>	<b>55.42</b>	
<b>Category V(A) - Agriculture (DSM Mandatory)</b>	<b>1115702</b>				<b>0</b>	<b>12637</b>	<b>0.00</b>	<b>0</b>	<b>5521713</b>	<b>1.03</b>	<b>0.00</b>	<b>0</b>	<b>40.10</b>	<b>-1.33</b>	<b>39.80</b>	<b>0</b>	<b>39.80</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15.39</b>	<b>55.19</b>	
Corporate Farmers	1911	2.50			4.14				1.03	0.00			-1.33	-0.30		-0.30						-0.30	
Other than Corporate Farmers	1113791	0.00			12633.08				0.00	0.00		40.10		40.10		40.10						40.10	
LT-V(B) Others	73				240		1		0.22	0.01		0.00	0.00	0.23		0.23						0.24	
Horticulture Nurseries with CL upto 15HP	73	4.00			240.00		0.56		0.22	0.01		0.00	0.00	0.23		0.23						0.23	
<b>Category VI - Local Bodies, St. Lighting &amp; PWS</b>	<b>73430</b>				<b>497</b>	<b>0.00</b>	<b>127</b>	<b>132620</b>	<b>298.30</b>	<b>9.95</b>	<b>0</b>	<b>4.41</b>	<b>0.59</b>	<b>313.25</b>	<b>0.00</b>	<b>313.25</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>313.85</b>	
<b>VI(A) - Street Lighting</b>	<b>46498</b>				<b>268</b>	<b>0.00</b>	<b>127</b>	<b>0</b>	<b>177.65</b>	<b>4.86</b>	<b>0</b>	<b>2.79</b>	<b>0.59</b>	<b>185.90</b>	<b>0.00</b>	<b>185.90</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>	<b>186.22</b>	
Panchayats	15515	6.10	384.00		106.17		39.63		64.76	1.52		0.93	0.59	67.80		67.80						67.80	
Municipalities	5301	6.60	384.00		54.60		15.55		22.84	0.60		0.32		23.75		23.75						23.75	
Corporations	29522	7.10	384.00		126.84		71.45		90.66	2.74		1.54		94.34		94.34						94.34	
<b></b>																							

Please Note:

Consumer Categories	No of consumers	Energy Charges (Rs/kWh) or (Rs/kVAh)	Demand charges (Rs/kVA/yr)	Demand charges (Rs/HP/yr)	Energy Sales (MU)	Energy sales (MVAh)	Connected Load/ Contract Demand (MVA)	Connected Load/ Contract Demand (HP)	Energy Charges (Rs Crores)	Demand /Fixed charges (Rs Crores)	Minimum Charges (Rs Crores)	Customer Charges (Rs crores)	Others (Rs Crores)	Gross Tariff Revenue (Rs Crores)	Incentives (Rs. Crs)	Net Revenue from Tariff (Rs. Crores)	Surcharge (Rs.Crs)	Additional Surcharge (Rs.Crs)	Grid Support Charges (Rs. Crs)	Direct	Apportioned	Total Revenue (Net of incentives) (Rs.Crs)	Remarks		
HT-I Indr. Time-of-Day Tariff (10 PM to 6 AM)		5.65			1059.43				598.58	0.00				598.58		598.58					1.29	598.87			
HT-I (A) Optional Cat. with CMD upto 150 kVA	696	7.00	960		114.06		85.37		80.47	8.20		1.41		90.08		90.08						0.14	90.22		
Lights & Fans		6.65			0.52				0.34	0.00				0.34		0.34						0.00	0.34		
Poultry Farms	152	6.65	4680		109.01		40.46		72.49	18.94		0.31		91.74		91.74						0.13	91.87		
Poultry Farms Time-of-Day Tariff (6 PM to 10 PM)		7.65							0.00	0.00				0.00		0.00						0.00	0.00		
Poultry Farms Time-of-Day Tariff (6 AM to 10 AM)		7.65							0.00	0.00				0.00		0.00						0.00	0.00		
Poultry Farms Time-of-Day Tariff (10 PM to 6 AM)		5.65							0.00	0.00				0.00		0.00						0.00	0.00		
Colony consumption		6.30		0.93					0.59	0.00				0.59		0.59						0.00	0.59		
Seasonal Industries	113	7.60	4680		49.88		34.77		37.91	16.27		0.23		54.41		54.41						0.06	54.47		
HT - I ( B) Ferro-alloys		5.90							0.00	0.00				0.00	0.00	0.00						0.00	0.00		
HT-II -Others	3292	7.80	4680		715.36		790.85		557.98	370.12		6.66		934.75	0.00	934.75	0.05	0.03				0.87	935.71		
HT-II Others - Time-of-Day Tariff (6 PM to 10 PM)		8.80			313.62				275.99	0.00				275.99		275.99						0.38	276.37		
HT-II Others - Time-of-Day Tariff (6 AM to 10 AM)		8.80			202.21				177.94	0.00				177.94		177.94						0.25	178.19		
HT-II Others - Time-of-Day Tariff (10 PM to 6 AM)		6.80			389.86				251.51	0.00				251.51		251.51						0.45	251.96		
HT III: Airports, Bus Stations and Railway Stations	10	7.50	4680		1.63		1.69		1.22	0.78		0.02		2.04	0.00	2.04							0.00	2.04	
HT-III - Aviation Time-of-Day Tariff (6 PM to 10 PM)		8.50			0.94				0.80	0.00				0.80		0.80						0.00	0.80		
HT-III - Aviation Time-of-Day Tariff (6 AM to 10 AM)		8.50			0.61				0.52	0.00				0.52		0.52						0.00	0.52		
HT-III - Aviation Time-of-Day Tariff (10 PM to 6 AM)		6.50			1.62				1.06	0.00				1.06		1.06						0.00	1.06		
HT -IV A Lift Irrigation & Agriculture	140	5.80	1980		50.11		47.94		29.08	9.48		0.28		38.84	0.00	38.84						0.06	38.90		
HT -IV B - CP Water Supply Schemes	127	5.10			71.78		38.39		36.81	0.00		0.26	-0.59	36.28	0.00	36.28						0.09	36.37		
HT-VI - Townships & Colony Supply	141	6.30	720		105.20		56.43		66.28	4.06		0.29		70.62	0.00	70.62						0.13	70.75		
HT - VII - Temporary Supply	209	10.80	6000		79.98		49.15		86.38	29.49		0.42	0.72	117.01	0.00	117.01						0.10	117.11		
HT- RESCOs									0.00	0.00				0.00	0.00	0.00						0.00	0.00		
HT IX - Electric Vehicle Charging Stations		6.00							0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00		
HT-IX EV - Time-of-Day Tariff (6 PM to 10 PM)		7.00							0.00	0.00				0.00		0.00						0.00	0.00		
HT-IX EV - Time-of-Day Tariff (6 AM to 10 AM)		7.00							0.00	0.00				0.00		0.00						0.00	0.00		
HT-IX EV - Time-of-Day Tariff (10 PM to 6 AM)		5.00							0.00	0.00				0.00		0.00						0.00	0.00		
<b>HT Category at 33 KV</b>	<b>574</b>				<b>5552</b>	<b>0.00</b>	<b>1570</b>	<b>0</b>	<b>3491.15</b>	<b>657.02</b>	<b>0.00</b>	<b>1.16</b>	<b>-0.60</b>	<b>4178.73</b>	<b>0.00</b>	<b>4178.73</b>	<b>128.21</b>	<b>21.89</b>	<b>0.00</b>	<b>0.00</b>		<b>6.76</b>	<b>4335.60</b>		
HT-I Indr Segregated	366	6.15	4680		1528.06		1110.24		939.76	519.52		0.74	-0.30	1459.79	0.00	1459.79	117.83	21.71				1.86	1601.19		
HT-I Indr. Time-of-Day Tariff (6 PM to 10 PM)		7.15			847.94				606.28	0.00				606.28		606.28						0.00	606.28		
HT-I Indr. Time-of-Day Tariff (6 AM to 10 AM)		7.15			660.86				472.51	0.00				472.51		472.51						1.03	473.55		
HT-I Indr. Time-of-Day Tariff (10 PM to 6 AM)		5.15			1458.31				751.03	0.00				751.03		751.03						0.80	751.83		
Lights & Fans		6.15			0.57				0.35	0.00				0.35		0.35						0.17	0.52		
Poultry Farms	3	6.15	4680		13.46		3.60		8.28	1.69		0.01		9.97		9.97						0.02	9.99		
Poultry Farms Time-of-Day Tariff (6 PM to 10 PM)		7.15							0.00	0.00				0.00		0.00						0.00	0.00		
Poultry Farms Time-of-Day Tariff (6 AM to 10 AM)		7.15							0.00	0.00				0.00		0.00						0.00	0.00		
Poultry Farms Time-of-Day Tariff (10 PM to 6 AM)		5.15							0.00	0.00				0.00		0.00						0.00	0.00		
Colony consumption	2	6.30			3.12				1.97	0.00				1.97		1.97						0.00	1.97		
Seasonal Industries		6.90	4680		3.53		2.55		2.44	1.19		0.00		3.63		3.63						0.00	3.64		
HT - I ( B) Ferro-alloys	2	5.50			39.40		8.00		21.67	0.00				21.67	0.00	21.67						0.05	21.72		
HT-II -Others	145	7.00	4680		315.27		304.63		220.69	142.57		0.29	-0.30	363.25	0.00	363.25	10.38	0.18				0.38	374.19		
HT-II Others - Time-of-Day Tariff (6 PM to 10 PM)		8.00			164.33				131.46	0.00				131.46		131.46						0.20	131.66		
HT-II Others - Time-of-Day Tariff (6 AM to 10 AM)		8.00			101.51				81.21	0.00				81.21		81.21						0.12	81.33		
HT-II Others - Time-of-Day Tariff (10 PM to 6 AM)		6.00			184.25				110.55	0.00				110.55		110.55						0.22	110.77		
HT III: Airports, Bus Stations and Railway Stations		7.85	4680						0.00	0.00				0.00	0.00	0.00						0.00	0.00		
HT-III - Aviation Time-of-Day Tariff (6 PM to 10 PM)		7.85							0.00	0.00				0.00		0.00						0.00	0.00		
HT-III - Aviation Time-of-Day Tariff (6 AM to 10 AM)		7.85							0.00	0.00				0.00		0.00						0.00	0.00		
HT-III - Aviation Time-of-Day Tariff (10 PM to 6 AM)		5.85							0.00	0.00				0.00		0.00						0.00	0.00		
HT -IV A Lift Irrigation & Agriculture	19	5.80	1980		31.81		42.91		18.45	8.50		0.04		26.98	0.00	26.98						0.00	27.02		
HT -IV B - CP Water Supply Schemes	13	5.10			105.06		43.75		53.58	0.00		0.03		53.61	0.00	53.61						0.13	53.73		
HT-VI - Townships & Colony Supply	15	6.30	720		63.57		36.31		40.05	2.61		0.03		42.69	0.00	42.69						0.08	42.77		
HT - VII - Temporary Supply	9	10.00	6000		30.89		18.12		30.89	10.87		0.02		41.78	0.00	41.78						0.04	41.82		
HT- RESCOs									0.00	0.00				0.00	0.00	0.00						0.00	0.00		
HT IX - Electric Vehicle Charging Stations		6.00							0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00		
HT-IX EV - Time-of-Day Tariff (6 PM to 10 PM)		7.00							0.00	0.00				0.00		0.00						0.00	0.00		
HT-IX EV - Time-of-Day Tariff (6 AM to 10 AM)		7.00							0.00	0.00				0.00		0.00						0.00	0.00		
HT-IX EV - Time-of-Day Tariff (10 PM to 6 AM)		5.00							0.00	0.00				0.00		0.00						0.00	0.00		
<b>HT Category at 132 KV</b>	<b>74</b>				<b>4733.41</b>	<b>0.00</b>	<b>1321.85</b>	<b>0.00</b>	<b>2639.19</b>	<b>434.32</b>	<b>0.00</b>	<b>0.29</b>	<b>-6.07</b>	<b>3667.72</b>	<b>0.00</b>	<b>3667.72</b>	<b>60.99</b>	<b>16.95</b>	<b>0.00</b>	<b>0.00</b>		<b>5.76</b>	<b>3151.43</b>		
HT-I Indr Segregated	38	5.65	4680		924.04		585.07		522.08	273.81		0.15		796.05	0.00	796.05	60.99	16.95				1.13	875.12		
HT-I Indr. Time-of-Day Tariff (6 PM to 10 PM)		6.65																							

Please Note:

Consumer Categories	No of consumers	Energy Charges (Rs/kWh) or (Rs/kVAh)	Demand charges (Rs/kVA/Yr)	Demand charges (Rs/HP/Yr)	Energy Sales (MU)	Energy sales (MVAh)	Connected Load/ Contract Demand (MVA)	Connected Load/ Contract Demand (HP)	Energy Charges (Rs Crores)	Demand /Fixed charges (Rs Crores)	Minimum Charges (Rs Crores)	Customer Charges (Rs crores)	Others (Rs Crores)	Gross Tariff Revenue (Rs Crores)	Incentives (Rs. Crs)	Net Revenue from Tariff (Rs. Crores)	Surcharge (Rs.Crs)	Additional Surcharge (Rs.Crs)	Grid Support Charges (Rs. Crs)	Direct	Apportioned	Total Revenue (Net of incentives) (Rs.Crs)	Remarks
HT - VII - Temporary Supply		9.80	6000					0.00	0.00					0.00	0.00	0.00					0.00	0.00	
HT- RESCOs								0.00	0.00					0.00	0.00	0.00						0.00	0.00
HT IX - Electric Vehicle Charging Stations		6.00						0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00
HT-IX EV - Time-of-Day Tariff (6 PM to 10 PM)		7.00						0.00	0.00					0.00	0.00	0.00						0.00	0.00
HT-IX EV - Time-of-Day Tariff (6 AM to 10 AM)		7.00						0.00	0.00					0.00	0.00	0.00						0.00	0.00
HT-IX EV - Time-of-Day Tariff (10 PM to 6 AM)		5.00						0.00	0.00					0.00	0.00	0.00						0.00	0.00
<b>TOTAL (LT + HT)</b>	<b>8253998</b>				<b>40880.81</b>	<b>0.00</b>	<b>15761.65</b>	<b>6725919.74</b>	<b>16974.84</b>	<b>2408.24</b>	<b>47.71</b>	<b>422.72</b>	<b>-8.81</b>	<b>19844.71</b>	<b>0.00</b>	<b>19844.71</b>	<b>194.54</b>	<b>40.05</b>	<b>0.00</b>	<b>0.00</b>	<b>49.69</b>	<b>20128.99</b>	

Consumer Categories	No of consumers	Components of tariff				Relevant sales related data																Total Revenue (Net of incentives) (Rs.Crs)	Remarks	
		Energy Charges (Rs/kWh) or (Rs/kVAh)	Demand charges (Rs/kVA/Yr)	Demand charges (Rs/HP/Yr)	Energy Sales (MU)	Energy sales (MVAh)	Energy sales (MU)	Energy sales (MVAh)	Energy Charges (Rs Crores)	Demand /Fixed charges (Rs Crores)	Minimum Charges (Rs Crores)	Customer Charges (Rs crores)	Others (Rs Crores)	Gross Tariff Revenue (Rs Crores)	Incentives (Rs. Crs)	Net Revenue from Tariff (Rs. Crores)	Surcharge (Rs.Crs)	Additional Surcharge (Rs.Crs)	Grid Support Charges (Rs. Crs)	Direct	Apportioned			
<b>LT Total - (Existing Categories)</b>	<b>8741688</b>				<b>23722</b>	<b>0.00</b>	<b>11621</b>	<b>7097790</b>	<b>7387.40</b>	<b>291</b>	<b>56</b>	<b>449.03</b>	<b>-4.38</b>	<b>8148.32</b>	<b>0</b>	<b>8148.32</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20.42</b>	<b>8168.74</b>	
<b>Category - Domestic (All)</b>	<b>6542568</b>				<b>8710.09</b>	<b>0.00</b>	<b>8636.20</b>	<b>0.00</b>	<b>3828.31</b>	<b>0.00</b>	<b>40.47</b>	<b>304.66</b>	<b>-3.66</b>	<b>4167.78</b>	<b>0.00</b>	<b>4167.78</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.50</b>	<b>4175.28</b>	
<b>Cat (A) Domestic - upto 100 units/month</b>	<b>3576176</b>				<b>2010.42</b>	<b>0.00</b>	<b>3222.31</b>	<b>0.00</b>	<b>355.08</b>	<b>0.00</b>	<b>40.47</b>	<b>116.61</b>	<b>-3.66</b>	<b>508.50</b>		<b>508.50</b>						<b>1.73</b>	<b>510.23</b>	
0 - 50 units	2021704	1.45			1457.69		1769.58		211.36		38.56	60.65	-3.66	306.92		306.92						1.25	308.17	
51 - 100 units	1554472	2.60			552.73		1452.73		143.71		1.91	55.96		201.58		201.58						0.48	202.06	
<b>Cat (B) (i) Domestic - &gt;100 &amp; =200 units/month</b>	<b>1875376</b>				<b>2991.66</b>	<b>0.00</b>	<b>2588.03</b>	<b>0.00</b>	<b>1077.54</b>	<b>0.00</b>	<b>0.00</b>	<b>112.52</b>	<b>0.00</b>	<b>1190.06</b>		<b>1190.06</b>				<b>0.00</b>	<b>2.58</b>	<b>1192.64</b>		
0 - 100 units	0	3.30			0.00		2088.73		689.28		0.00	0.00		689.28		689.28						1.80	691.08	
101 - 200 units	1875376	4.30			902.93		2588.03		388.26		0.00	112.52		500.78		500.78						0.78	501.56	
<b>Cat (B) (ii) Domestic - &gt;200 units/month</b>	<b>1091016</b>				<b>3708.01</b>	<b>0.00</b>	<b>2825.86</b>	<b>0.00</b>	<b>2393.69</b>	<b>0.00</b>	<b>0.00</b>	<b>75.53</b>	<b>0.00</b>	<b>2469.22</b>		<b>2469.22</b>				<b>0.00</b>	<b>3.19</b>	<b>2472.41</b>		
0 - 200 units	0	5.00			2048.94		0.00		1024.47		0.00	0.00		1024.47		1024.47						1.76	1026.24	
201 - 300 units	665400	7.20			681.24		1389.07		490.49		0.00	39.32		529.81		529.81						0.59	530.40	
301 - 400 units	247421	8.50			307.65		674.24		261.51		0.00	16.11		277.61		277.61						0.26	277.88	
401 - 800 units	156104	9.00			388.77		559.67		349.89		0.00	14.22		364.11		364.11						0.33	364.45	
More than 800 units	22091	9.50			281.40		202.88		267.33		0.00	5.88		273.21		273.21						0.24	273.46	
<b>Category II (A, B, C &amp; D) - Non-domestic/Commercial</b>	<b>873585</b>				<b>2665</b>	<b>0.00</b>	<b>2725</b>	<b>0</b>	<b>2521.29</b>	<b>185.21</b>	<b>15</b>	<b>57.63</b>	<b>0.26</b>	<b>2779.24</b>	<b>0.00</b>	<b>2779.24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2.29</b>	<b>2781.54</b>	
<b>Category II - Non-domestic/Commr (A &amp; B)</b>	<b>869897</b>				<b>2660</b>	<b>0.00</b>	<b>2717</b>	<b>0</b>	<b>2516.61</b>	<b>184.65</b>	<b>15</b>	<b>57.34</b>	<b>0.26</b>	<b>2773.44</b>		<b>2773.44</b>					<b>0</b>	<b>2.29</b>	<b>2775.73</b>	
<b>LT - II (A) Upto 50 units/month</b>	<b>539738</b>				<b>78</b>	<b>0.00</b>	<b>916</b>	<b>0</b>	<b>47.09</b>	<b>54.94</b>	<b>15</b>	<b>33.12</b>	<b>0.26</b>	<b>149.99</b>		<b>149.99</b>					<b>0</b>	<b>0.07</b>	<b>150.06</b>	
0-50 units	539738	6.00	600.00		78.49		915.74		47.09	54.94	14.58	33.12	0.26	149.99		149.99						0.07	150.06	
<b>LT - II (B) &gt;50 Units/month</b>	<b>329859</b>				<b>2582</b>	<b>0.00</b>	<b>1801</b>	<b>0</b>	<b>2469.52</b>	<b>130</b>	<b>0</b>	<b>24.22</b>	<b>0.00</b>	<b>2623.44</b>		<b>2623.44</b>				<b>0</b>	<b>2.22</b>	<b>2625.67</b>		
0-100 units	125681	7.50	720.00		162.54		242.37		136.90	17.45		8.29		162.64		162.64						0.16	162.80	
101- 300 units	121573	8.90	720.00		465.77		427.17		414.54	30.76		9.48		454.77		454.77						0.40	455.18	
301- 500 units	30873	9.40	720.00		255.34		208.17		240.02	14.99		2.41		257.41		257.41						0.22	257.63	
Above 500 units	51852	10.00	720.00		1678.06		923.69		1678.06	66.51		4.04		1748.61		1748.61						1.44	1750.05	
<b>LT - II (C) Advertising Hoardings</b>	<b>2159</b>				<b>3.36</b>		<b>6.00</b>		<b>4.03</b>	<b>0.43</b>	<b>0.29</b>	<b>0.18</b>		<b>4.94</b>		<b>4.94</b>						<b>0.00</b>	<b>4.94</b>	
<b>LT-II(D) Hair Cutting Salons up to 200 units/month</b>	<b>1799</b>				<b>1</b>	<b>0.00</b>	<b>2</b>	<b>0</b>	<b>0.64</b>	<b>0</b>	<b>0</b>	<b>0.10</b>	<b>0.00</b>	<b>0.87</b>		<b>0.87</b>				<b>0</b>	<b>0.00</b>	<b>0.87</b>		
0 - 50 units	1445	5.30	720.00		0.75		1.35		0.40	0.10		0.08		0.57		0.57						0.00	0.57	
51 - 100 units	243	6.60	720.00		0.27		0.27		0.18	0.02		0.02		0.21		0.21						0.00	0.21	
101 - 200 units	111	7.50	720.00		0.09		0.16		0.07	0.01		0.01		0.09		0.09						0.00	0.09	
<b>Category III - Industrial</b>	<b>43778</b>				<b>916.82</b>	<b>0.00</b>	<b>0.00</b>	<b>1251270.00</b>	<b>611.26</b>	<b>90.09</b>	<b>0.00</b>	<b>36.28</b>	<b>0.16</b>	<b>737.79</b>	<b>0.00</b>	<b>737.79</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.79</b>	<b>738.58</b>	
<b>Category III - Industrial</b>	<b>43778</b>				<b>916.82</b>	<b>0.00</b>	<b>0.00</b>	<b>1251270.00</b>	<b>611.26</b>	<b>90.09</b>	<b>0.00</b>	<b>36.28</b>	<b>0.16</b>	<b>737.79</b>		<b>737.79</b>				<b>0.00</b>	<b>0.00</b>	<b>0.79</b>	<b>738.58</b>	
Industrial Normal	40494	6.70	720	537.31	873.90			1251220.35	585.51	90.09		35.98	0.15	711.73		711.73						0.75	712.48	
Fisciculture/Prawn culture	0								0.00	0.00		0.00		0.00		0.00						0.00	0.00	
Sugarcane crushing	0								0.00	0.00		0.00		0.00		0.00						0.00	0.00	
Poultry farms	3284	6.00	600.00	447.76	42.92			49.65	25.75	0.00	0.00	0.30	0.02	26.06		26.06						0.04	26.10	
Mushroom & Rabbit Farms	0							0.00	0.00	0.00		0.00		0.00		0.00						0.00	0.00	
Seasonal Industries	0							0.00	0.00	0.00		0.00		0.00		0.00						0.00	0.00	
<b>Category IV- Cottage Industries</b>	<b>4243</b>				<b>9.08</b>	<b>0.00</b>	<b>0.00</b>	<b>16360.00</b>	<b>3.63</b>	<b>0.29</b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>	<b>4.25</b>	<b>0.00</b>	<b>4.25</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>4.26</b>		
Cat -IV(A) - Cottage Industries	4243	4.00			240.00	9.08		16360.00	3.63	0.29		0.33		4.25		4.25						0.01	4.26	
Cat-IV(B) Agro Based Activity	0													0.00		0.00						0.00	0.00	
<b>Category V (A&amp;B) - Agriculture</b>	<b>1145031</b>				<b>10818</b>	<b>0.00</b>	<b>0</b>	<b>5668900</b>	<b>1.76</b>	<b>0.01</b>	<b>0</b>	<b>39.80</b>	<b>-1.25</b>	<b>40.32</b>	<b>0</b>	<b>40.32</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9.31</b>	<b>49.63</b>	
<b>Category V(A) - Agriculture (DSM Mandatory)</b>	<b>1144951</b>				<b>10818</b>	<b>0.00</b>	<b>0</b>	<b>5668345</b>	<b>1.80</b>	<b>0.00</b>	<b>0</b>	<b>39.80</b>	<b>-1.25</b>	<b>40.85</b>		<b>40.85</b>						<b>9.31</b>	<b>49.37</b>	
Corporate Farmers	1011	2.50			6.00																			

Please Note:

Consumer Categories	No of consumers	Energy Charges (Rs/kWh) or (Rs/kVAh)	Demand charges (Rs/kVA/yr)	Demand charges (Rs/HP/yr)	Energy Sales (MU)	Energy sales (MVAh)	Connected Load/ Contract Demand (MVA)	Connected Load/ Contract Demand (HP)	Energy Charges (Rs Crores)	Demand /Fixed charges (Rs Crores)	Minimum Charges (Rs Crores)	Customer Charges (Rs crores)	Others (Rs Crores)	Gross Tariff Revenue (Rs Crores)	Incentives (Rs. Crs)	Net Revenue from Tariff (Rs. Crores)	Surcharge (Rs.Crs)	Additional Surcharge (Rs.Crs)	Grid Support Charges (Rs. Crs)	Direct	Apportioned	Total Revenue (Net of Incentives) (Rs. Crs)	Remarks
<b>Category VIII-Temporary Supply</b>	4272		252	0	43	0.00	38	0	47.16	0.95	0	0.33	-0.01	48.43	0.00	48.43	0.00	0.00	0.00	0	0.04	48.47	
All units	4272	11.00	252.00		42.87		37.65	0	47.16	0.95	0	0.33	-0.01	48.43		48.43					0.04	48.47	
<b>Category IX-Electric Vehicle Charging Stations</b>	3		0	0	0	0.00	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	
All units	3	6.00			0.00		0.05	0	0.00	0.00	0	0.00	0.00	0.00		0.00				0	0.00	0.00	
<b>New L T Categories ( Total )</b>	0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00				0.00	0.00	0.00	
<b>TOTAL (LT including new categories)</b>	<b>8741688</b>	<b>0.00</b>	<b>0</b>	<b>0</b>	<b>23722.47</b>	<b>0.00</b>	<b>11621</b>	<b>7097790</b>	<b>7357.40</b>	<b>290.50</b>	<b>56</b>	<b>449.03</b>	<b>-4.38</b>	<b>8148.32</b>	<b>0</b>	<b>8148.32</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20.42</b>	<b>8168.74</b>	Others include previous year adjustments
<b>HIGH TENSION</b>	<b>9675</b>				<b>16629.75</b>	<b>0.00</b>	<b>4375.65</b>	<b>0.00</b>	<b>10528.96</b>	<b>1794.26</b>	<b>0.00</b>	<b>19.70</b>	<b>2.11</b>	<b>12345.93</b>	<b>0.00</b>	<b>12345.93</b>	<b>213.60</b>	<b>66.17</b>	<b>0.00</b>	<b>0.00</b>	<b>14.32</b>	<b>12639.12</b>	
<b>HT Category at 11 KV</b>	<b>9062</b>				<b>5868.36</b>	<b>0.00</b>	<b>1937.40</b>	<b>0.00</b>	<b>4152.17</b>	<b>852.92</b>	<b>0.00</b>	<b>18.30</b>	<b>7.35</b>	<b>3030.74</b>	<b>0.00</b>	<b>3030.74</b>	<b>5.30</b>	<b>1.09</b>	<b>0.00</b>	<b>0.00</b>	<b>5.05</b>	<b>3042.19</b>	
HT-I Indl Segregated	3770.00	6.65	4680.00		1211.80		1007.35		805.84	471.44		7.62	-0.01	1284.00	0.00	1284.00	4.77	1.09	0.00	0.00	1.04	1291.81	
HT-I Indrl. Time-of-Day Tariff (6 PM to 10 PM)		7.65			590.82				451.82	0.00				451.82		451.82					0.51	452.33	
HT-I Indrl. Time-of-Day Tariff (6 AM to 10 AM)		7.65			562.54				430.34	0.00				430.34		430.34					0.48	430.83	
HT-I Indrl. Time-of-Day Tariff (10 PM to 6 AM)		5.65			1084.45				612.71	0.00				612.71		612.71					0.93	613.65	
HT-I (A) Optional Cat. with CMD upto 150 kVA	796.00	7.00	960.00		139.46		69.56		97.62	6.68		1.61	5.34	111.24	0.00	111.24					0.12	111.36	
Lights & Fans		6.65			0.68				0.45	0.00				0.45		0.45					0.00	0.45	
Poultry Farms	159.00	6.65	4680.00		36.61		34.73		24.35	16.25		0.32		40.92	0.00	40.92					0.03	40.95	
Poultry Farms Time-of-Day Tariff (6 PM to 10 PM)		7.65			20.09				15.37	0.00				15.37		15.37					0.02	15.39	
Poultry Farms Time-of-Day Tariff (6 AM to 10 AM)		7.65			17.98				13.75	0.00				13.75		13.75					0.02	13.77	
Poultry Farms Time-of-Day Tariff (10 PM to 6 AM)		5.65			33.74				19.08	0.00				19.08		19.08					0.03	19.03	
Colony consumption		6.30			0.73				0.46	0.00				0.46		0.46					0.00	0.46	
Seasonal Industries	144.00	7.60	4680.00		68.28		39.99		51.89	18.72		0.29		70.90	0.00	70.90					0.06	70.96	
HT - I ( B) Ferro-alloys		5.90			0.00				0.00	0.00		0.00		0.00	0.00	0.00				0.00	0.00	0.00	
HT-II -Others	3500.00	7.80	4680.00		750.97		638.01		585.76	298.59		7.08	0.76	892.18	0.00	892.18	0.53	0.00	0.00	0.00	0.65	893.36	
HT-II Others - Time-of-Day Tariff (6 PM to 10 PM)		8.80			331.59				291.80	0.00				291.80		291.80					0.29	292.08	
HT-II Others - Time-of-Day Tariff (6 AM to 10 AM)		8.80			233.82				205.76	0.00				205.76		205.76					0.20	205.96	
HT-II Others - Time-of-Day Tariff (10 PM to 6 AM)		6.80			401.99				273.35	0.00				273.35		273.35					0.35	273.70	
HT-III - Airports, Bus Stations and Railway Stations	10.00	7.50	4680.00		1.18		1.37		0.88	0.64		0.02		1.54	0.00	1.54			0.00	0.00	0.00	1.54	
HT-III - Aviation Time-of-Day Tariff (6 PM to 10 PM)		8.50			1.32				0.96	0.00				0.96		0.96					0.00	0.97	
HT-III - Aviation Time-of-Day Tariff (6 AM to 10 AM)		8.50			0.52				0.44	0.00				0.44		0.44					0.00	0.44	
HT-III - Aviation Time-of-Day Tariff (10 PM to 6 AM)		6.50			1.62				1.06	0.00				1.06		1.06					0.00	1.06	
HT-IV A Lift Irrigation & Agriculture	137.00	5.80	1980.00		50.81		31.50		29.47	6.24		0.28	-0.09	35.89	0.00	35.89			0.00	0.00	0.04	35.94	
HT-IV B - CP Water Supply Schemes	133.00	5.10			104.05		34.04		53.07	0.00		0.27	-0.25	53.08	0.00	53.08					0.09	53.17	
HT-VI - Townships & Colony Supply	156.00	6.30	720.00		121.17		25.73		76.34	1.85		0.32		78.51	0.00	78.51					0.10	78.61	
HT - VII - Temporary Supply	245.00	10.80	6000.00		100.22		54.20		108.24	32.52		0.50	1.60	142.85	0.00	142.85					0.09	142.94	
HT- RESCOs									0.00	0.00				0.00	0.00	0.00				0.00	0.00	0.00	
HT IX - Electric Vehicle Charging Stations	2.00	6.00		0.00	2.44		0.92		1.46	0.00		0.00		1.46	0.00	1.46				0.00	1.47		
HT-IX EV - Time-of-Day Tariff (6 PM to 10 PM)		7.00							0.00	0.00				0.00		0.00					0.00	0.00	
HT-IX EV - Time-of-Day Tariff (6 AM to 10 AM)		7.00							0.00	0.00				0.00		0.00					0.00	0.00	
HT-IX EV - Time-of-Day Tariff (10 PM to 6 AM)		5.00							0.00	0.00				0.00		0.00					0.00	0.00	
<b>HT Category at 33 KV</b>	<b>549.00</b>			<b>0.00</b>	<b>5488.92</b>	<b>0.00</b>	<b>1266.40</b>	<b>0.00</b>	<b>3451.58</b>	<b>561.01</b>	<b>0.00</b>	<b>1.11</b>	<b>-5.24</b>	<b>4008.46</b>	<b>0.00</b>	<b>4008.46</b>	<b>125.97</b>	<b>39.08</b>	<b>0.00</b>	<b>0.00</b>	<b>4.73</b>	<b>4178.23</b>	
HT-I Indl Segregated	346	6.15	4680		1394.08		922.00		857.36	431.50	0.00	0.70		1289.56	0.00	1289.56	122.68	38.92	0.00	0.00	1.20	1452.38	
HT-I Indrl. Time-of-Day Tariff (6 PM to 10 PM)		7.15			736.69				526.73	0.00				526.73		526.73					0.63	527.37	
HT-I Indrl. Time-of-Day Tariff (6 AM to 10 AM)		7.15			654.54				468.00	0.00				468.00		468.00					0.56	468.56	
HT-I Indrl. Time-of-Day Tariff (10 PM to 6 AM)		5.15			1456.07				749.88	0.00				749.88		749.88					1.25	751.13	
Lights & Fans		6.15			0.00				0.00	0.00				0.00		0.00					0.00	0.00	
Poultry Farms	2	6.15	4680	0	3.36		2.55		2.07	1.19		0.00		3.26	0.00	3.26					0.00	3.27	
Poultry Farms Time-of-Day Tariff (6 PM to 10 PM)		7.15			1.76				1.26	0.00				1.26		1.26					0.00	1.26	
Poultry Farms Time-of-Day Tariff (6 AM to 10 AM)		7.15			1.51				1.08	0.00				1.08		1.08					0.00	1.08	
Poultry Farms Time-of-Day Tariff (10 PM to 6 AM)		5.15			3.37				1.74	0.00				1.74		1.74					0.00	1.74	
Colony consumption		6.30			2.11				1.33	0.00				1.33		1.33					0.00	1.33	
Seasonal Industries	2	6.90	4680	0	1.73		2.82		1.19	1.32		0.00		2.52	0.00	2.52					0.00	2.52	
HT - I ( B) Ferro-alloys	2	5.50			44.05		7.54		24.23	0.00		0.00	-5.24	18.99	0.00	18.99			0.00	0.04	19.03		
HT-II -Others	141	7.00	4680		361.72		233.66		253.20	109.35		0.29		362.84	0.00	362.84	3.29	0.16	0.00	0.00	0.31	366.60	
HT-II Others - Time-of-Day Tariff (6 PM to 10 PM)		8.00			173.57				138.86	0.00				138.86		138.86					0.15	139.00	
HT-II Others - Time-of-Day Tariff (6 AM to 10 AM)		8.00			132.94				106.35	0.00				106.35		106.35					0.11	106.47	
HT-II Others - Time-of-Day Tariff (10 PM to 6 AM)		6.00			212.93				127.76	0.00				127.76		127.76					0.18	127.94	
HT-III - Airports, Bus Stations and Railway Stations		6.85	4680		0.00				0.00	0.00		0.00		0.00	0.00	0.00			0.00	0.00	0.00	0.00	
HT-III - Aviation Time-of-Day Tariff (6 PM to 10 PM)		7.85			0.00				0.00	0.00		0.00		0.00		0.00					0.00	0.	



Please Note:

Consumer Categories	No of consumers	Energy Charges (Rs/kWh) or (Rs/kVAh)	Demand charges (Rs/HP/Yr)	Demand charges (Rs/HP/Yr)	Energy Sales (MU)	Energy sales (MVAh)	Connected Load/ Contract Demand (MVA)	Connected Load/ Contract Demand (HP)	Energy Charges (Rs Crores)	Demand /Fixed charges (Rs Crores)	Minimum Charges (Rs Crores)	Customer Charges (Rs crores)	Others (Rs Crores)	Gross Tariff Revenue (Rs Crores)	Incentives (Rs. Crs)	Net Revenue from Tariff (Rs. Crores)	Surcharge (Rs.Crs)	Additional Surcharge (Rs.Crs)	Grid Support Charges (Rs. Crs)	Direct	Apportioned	Total Revenue (Net of Incentives) (Rs.Crs)	Remarks	
<b>Category VI - Local Bodies, St. Lighting &amp; PWS</b>	<b>104891</b>			0	478.12	0.00	162	145660	286.10	11.82	0.25	6.27	-1.44	303.00	0.00	303.00	0.00	0.00	0.00	0	0	0.37	303.37	
<b>VI(A) - Street Lighting</b>	<b>71714</b>				235.11	0.00	162	235.11	167.88	6.23	0.25	4.22	-1.44	167.16		167.16				0	0	0.18	167.33	
Panchayats	33587	6.10	384.00		70.63		59.48		43.08	2.28	0.09	2.04	-1.44	46.06		46.06						0.05	46.11	
Municipalities	10736	6.60	384.00		39.62		26.78		26.15	1.03	0.07	0.58		27.82		27.82						0.03	27.85	
Corporations	27391	7.10	384.00		124.86		75.99		88.65	2.92	0.09	1.61		93.27		93.27						0.10	93.36	
<b>VI(B) - PWS Schemes</b>	<b>33177</b>				243.01	0.00	0	145669.85	128.21	5.59	0.00	2.05	0.00	135.85		135.85				0	0	0.19	136.04	
Panchayats	24068	5.00	384.00	167.68				101911.00	33.84	3.91		1.53		99.29		99.29						0.15	99.43	
Municipalities	5868	6.10	384.00	42.90				26799.97	26.17	1.03		0.33		27.53		27.53						0.03	27.56	
Corporations	3241	6.60	384.00	12.43				16948.88	8.20	0.65		0.19		9.04		9.04						0.01	9.05	
<b>Category VII (A&amp;B) - General &amp; Religious</b>	<b>23176</b>			0	47.71	0.00	62	0	33.64	1.57	0.68	1.67	-0.01	37.55	0.00	37.55	0.00	0.00	0.00	0	0	0.04	37.58	
<b>Category VII A - General Purpose</b>	<b>19165</b>	7.30	252.00		41.46		57.45		30.26	1.45	0.68	1.36		33.77		33.77						0.03	33.81	
<b>Category VII B - Religious Purposes</b>	<b>4011</b>				6.25	0.00	4.97		3.38	0.13	0.00	0.29	-0.01	3.78		3.78				0	0	0.00	3.78	
CL up to 2 kW	4011	5.40	252.00		6.25		4.97		3.38	0.13	0.00	0.29	-0.01	3.78		3.78						0.00	3.78	
CL above 2 kW		6.00	252.00						0.00	0.00				0.00		0.00						0.00	0.00	
<b>Category VIII-Temporary Supply</b>	<b>7589</b>		252	0	53.51	0.00	60	0	58.86	1.51	1.36	0.54	0.74	63.02	0.00	63.02	0.00	0.00	0.00	0	0	0.04	63.06	
All units	7589	11.00	252.00		53.51		59.95		58.86	1.51	1.36	0.54	0.74	63.02		63.02						0.04	63.06	
<b>Category IX-Electric Vehicle Charging Stations</b>	<b>19</b>		0	0	0.02		0.38	0	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0	0	0.00	0.01	
All units	19	6.00			0.02		0.38		0.01	0.00	0.00	0.00	0.00	0.01		0.01						0.00	0.01	
<b>New L Y Categories ( Total )</b>	<b>0</b>		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	
<i>LT VI C PWW</i>																							0.00	
																							0.00	
<b>TOTAL (LT including new categories)</b>	<b>889316</b>	0.00	0	0	24368	0.00	12447.12	7347398.55	6851.15	304.77	87.04	438.75	-2.16	7679.54	0	7679.54	0	0	0	0	0	18.93	7698.48	
<b>HIGH TENSION</b>	<b>9903</b>				14220.35	0.00	6572.05	0.00	8795.02	2491.72	0.00	20.05	366.60	11673.39	0.00	11673.39	272.51	79.83	0.00	0.00	0.00	11.05	12036.78	
<b>HT Category at 11 kV</b>	<b>9265</b>				5085.20	0.00	2571.90	0.00	3643.64	1106.34	0.00	18.63	365.78	5034.36	0.00	5034.36	6.74	1.14	0.00	0.00	0.00	3.95	5046.19	
HT-I Indl Segregated	3785	6.65	4680		1030.87		1297.47		685.53	607.21		7.65	258.65	1559.05	0.00	1559.05	4.83	1.14	0.00	0.00	0.00	0.80	1565.81	
HT-I Indl. Time-of-Day Tariff (6 PM to 10 PM)		7.65			544.97				416.90	0.00				416.90		416.90						0.42	417.33	
HT-I Indl. Time-of-Day Tariff (6 AM to 10 AM)		7.65			524.80				401.47	0.00				401.47		401.47						0.41	401.88	
HT-I Indl. Time-of-Day Tariff (10 PM to 6 AM)		5.65			1007.29				569.12	0.00				569.12		569.12						0.78	569.90	
HT-I HMMWSSB	49	3.95	4680		25.38		12.47		10.03	5.84		1.86		15.89		15.89						0.02	15.93	
HT-I (A) Optional Cat. with CMD upto 150 kVA	918	7.00	960		149.43		115.61		104.60	11.10				117.66		117.66						0.12	117.67	
Lights & Fans		6.65			0.28				0.19	0.00				0.19		0.19						0.00	0.19	
Poultry Farms	179	6.65	4680		39.97		45.89		26.58	21.48		0.36		48.42		48.42						0.03	48.45	
Poultry Farms Time-of-Day Tariff (6 PM to 10 PM)		7.65			20.91				15.99	0.00				15.99		15.99						0.02	16.01	
Poultry Farms Time-of-Day Tariff (6 AM to 10 AM)		7.65			18.96				14.51	0.00				14.51		14.51						0.01	14.52	
Poultry Farms Time-of-Day Tariff (10 PM to 6 AM)		5.65			35.02				19.79	0.00				19.79		19.79						0.03	19.81	
Colony consumption		6.30			0.95				0.60	0.00				0.60		0.60						0.00	0.60	
Seasonal Industries	151	7.60	4680		61.33		45.33		46.61	21.21		0.31		68.13		68.13						0.05	68.18	
HT-II (B) Ferro-alloys		5.90			0.00				0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	
HT-II - Others	3500	7.80	4680		478.20		820.98		372.98	384.22		7.08	107.09	871.39	0.00	871.39	1.91	0.00	0.00			0.37	873.67	
HT-II Others - Time-of-Day Tariff (6 PM to 10 PM)		8.80			221.79				195.17	0.00				195.17		195.17						0.17	195.34	
HT-II Others - Time-of-Day Tariff (6 AM to 10 AM)		8.80			176.16				155.02	0.00				155.02		155.02						0.14	155.16	
HT-II Others - Time-of-Day Tariff (10 PM to 6 AM)		6.80			305.63				207.83	0.00				207.83		207.83						0.24	208.07	
HT-III: Airports, Bus Stations and Railway Stations	10	7.50	4680		0.45		1.69		0.34	0.79		0.02		1.15	0.00	1.15	0.00	0.00	0.00			0.00	1.15	
HT-III - Aviation Time-of-Day Tariff (6 PM to 10 PM)		8.50			0.57				0.49	0.00				0.49		0.49						0.00	0.49	
HT-III - Aviation Time-of-Day Tariff (6 AM to 10 AM)		8.50			0.29				0.25	0.00				0.25		0.25						0.00	0.25	
HT-III - Aviation Time-of-Day Tariff (10 PM to 6 AM)		6.50			1.03				0.67	0.00				0.67		0.67						0.00	0.67	
HT -IV A Lift Irrigation & Agriculture	137	5.80	1980		76.63		47.98		44.45	9.50		0.28		54.22	0.00	54.22	0.00	0.00	0.00			0.06	54.28	
HT -IV B - CP Water Supply Schemes	133	5.10			140.26		39.64		71.53	0.00		0.27		71.80	0.00	71.80	0.00	0.00	0.00			0.11	71.91	
HT-VI - Townships & Colony Supply	156	6.30	720		129.30		76.44		81.46	5.96		0.32		87.29	0.00	87.29	0.00	0.00	0.00			0.10	87.38	
HT -VII - Temporary Supply	245	10.80	6000		83.13		65.81		100.58	39.49		0.50	0.00	140.57	0.00	140.57	0.00	0.00	0.00			0.07	140.64	
HT-RESCOs									0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	
HT IX - Electric Vehicle Charging Stations	2	6.00			1.60		2.60		0.96	0.00				0.96	0.00	0.96	0.00	0.00	0.00			0.00	0.96	
HT-IX EV - Time-of-Day Tariff (6 PM to 10 PM)		7.00							0.00	0.00				0.00	0.00	0.00						0.00	0.00	
HT-IX EV - Time-of-Day Tariff (6 AM to 10 AM)		7.00							0.00	0.00				0.00	0.00	0.00						0.00	0.00	
HT-IX EV - Time-of-Day Tariff (10 PM to 6 AM)		5.00							0.00	0.00				0.00	0.00	0.00						0.00	0.00	
<b>HT Category at 33 kV</b>	<b>554</b>				4540.55	0.00	1558.75	0.00	2824.21	676.51	0.00	1.11	0.00	3501.83	0.00	3501.83	151.85	44.73	0.00	0.00	0.00	3.53	3701.93	

Please Note:

Consumer Categories	No of consumers	Energy Charges (Rs/kWh) or (Rs/kVAh)	Demand charges (Rs/kVA/yr)	Demand charges (Rs/HP/yr)	Energy Sales (MU)	Energy sales (MVAh)	Connected Load/ Contract Demand (MVA)	Connected Load/ Contract Demand (HP)	Energy Charges (Rs Crores)	Demand /Fixed charges (Rs Crores)	Minimum Charges (Rs Crores)	Customer Charges (Rs crores)	Others (Rs Crores)	Gross Tariff Revenue (Rs Crores)	Incentives (Rs. Crs)	Net Revenue from Tariff (Rs. Crores)	Surcharge (Rs. Crs)	Additional Surcharge (Rs. Crs)	Grid Support Charges (Rs. Crs)	Direct	Apportioned	Total Revenue (Net of incentives) (Rs. Crs)	Remarks	
HT-I (B) Ferro-alloys	1	5.50			25.49		4.00		14.02	0.00				14.02	0.00	14.02	4.13	0.11	0.00			0.02	18.28	
HT-II -Others	132	7.00	4680.00		240.11		309.43		168.08	144.92		0.27		313.16	0.00	313.16						0.19	313.35	
HT-II Others - Time-of-Day Tariff (6 PM to 10 PM)		8.00			115.66				92.53	0.00				92.53	0.00	92.53						0.09	92.62	
HT-II Others - Time-of-Day Tariff (6 AM to 10 AM)		8.00			99.25				79.40	0.00				79.40	0.00	79.40						0.08	79.47	
HT-II Others - Time-of-Day Tariff (10 PM to 6 AM)		6.00			171.17				102.70	0.00				102.70	0.00	102.70						0.13	102.83	
HT-III: Airports, Bus Stations and Railway Stations		6.85	4680.00						0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	
HT-III - Aviation Time-of-Day Tariff (6 PM to 10 PM)		7.85							0.00	0.00				0.00	0.00	0.00						0.00	0.00	
HT-III - Aviation Time-of-Day Tariff (6 AM to 10 AM)		7.85							0.00	0.00				0.00	0.00	0.00						0.00	0.00	
HT-III - Aviation Time-of-Day Tariff (10 PM to 6 AM)		5.85							0.00	0.00				0.00	0.00	0.00						0.00	0.00	
HT-IV B - CP Water Supply Schemes	19	5.80	1980.00		14.51		42.91		8.42	6.50		0.04		16.95	0.00	16.95	0.00	0.00	0.00			0.01	16.96	
HT-VI - Townships & Colony Supply	20	6.30	720.00		85.16		51.71		57.61	3.72		0.04		57.41	0.00	57.41	0.00	0.00	0.00			0.07	57.48	
HT-VII -Temporary Supply	4	10.00	6000.00		20.23		10.75		20.23	6.45		0.01		26.69	0.00	26.69	0.00	0.00	0.00			0.02	26.71	
HT- RESCOs									0.00	0.00				0.00	0.00	0.00	0.00	0.00				0.00	0.00	
HT-IX - Electric Vehicle Charging Stations		6.00							0.00	0.00				0.00	0.00	0.00	0.00	0.00				0.00	0.00	
HT-IX EV - Time-of-Day Tariff (6 PM to 10 PM)		7.00							0.00	0.00				0.00	0.00	0.00	0.00	0.00				0.00	0.00	
HT-IX EV - Time-of-Day Tariff (6 AM to 10 AM)		7.00							0.00	0.00				0.00	0.00	0.00	0.00	0.00				0.00	0.00	
HT-IX EV - Time-of-Day Tariff (10 PM to 6 AM)		5.00							0.00	0.00				0.00	0.00	0.00	0.00	0.00				0.00	0.00	
<b>HT Category at 132 kV</b>	<b>84</b>				<b>4594.60</b>	<b>0.00</b>	<b>2441.40</b>	<b>0.00</b>	<b>2427.17</b>	<b>708.87</b>	<b>0.00</b>	<b>0.31</b>	<b>0.86</b>	<b>3137.20</b>	<b>0.00</b>	<b>3137.20</b>	<b>113.91</b>	<b>33.96</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.57</b>	<b>3288.68</b>	
HT-I Indr Segregated	39	5.65	4680		559		622.32		315.67	291.25		0.16		607.07	0.00	607.07	105.53	33.96				0.43	747.00	
HT-I Indr. Time-of-Day Tariff (6 PM to 10 PM)		6.65			208				138.61	0.00				138.61	0.00	138.61						0.16	138.77	
HT-I Indr. Time-of-Day Tariff (6 AM to 10 AM)		6.65			207				137.85	0.00				137.85	0.00	137.85						0.16	138.01	
HT-I Indr. Time-of-Day Tariff (10 PM to 6 AM)		4.65			591				274.85	0.00				274.85	0.00	274.85						0.46	275.31	
HT-I HMM/SSB	6	3.95	4680		774		136.90		305.88	64.07				369.95	0.00	369.95						0.60	370.55	
Lights & Fans		5.65			0				0.02	0.00				0.02	0.00	0.02						0.00	0.02	
Colony consumption		6.30			5				2.92	0.00				2.92	0.00	2.92						0.00	2.92	
Seasonal Industries		6.70	4680						0.00	0.00				0.00	0.00	0.00	0.00	0.00				0.00	0.00	
HT - I (B) Ferro-alloys	1	5.00			105		25.20		52.27	0.00				52.27	0.00	52.27						0.08	52.35	
HT-II -Others	4	6.80	4680		64		17.07		43.60	7.99		0.02		51.61	0.00	51.61	8.38	0.00				0.05	60.04	
HT-II Indr. Time-of-Day Tariff (6 PM to 10 PM)		7.80			6				4.40	0.00				4.40	0.00	4.40						0.00	4.40	
HT-II Others - Time-of-Day Tariff (6 AM to 10 AM)		7.80			6				4.38	0.00				4.38	0.00	4.38						0.00	4.38	
HT-II Others - Time-of-Day Tariff (10 PM to 6 AM)		5.80			9				5.49	0.00				5.49	0.00	5.49						0.01	5.49	
HT-III: Airports, Bus Stations and Railway Stations	1	6.45	4680		16		11.00		10.44	5.15		0.00	0.86	16.45	0.00	16.45						0.01	16.47	
HT-III - Aviation Time-of-Day Tariff (6 PM to 10 PM)		7.45			10				7.37	0.00				7.37	0.00	7.37						0.01	7.38	
HT-III - Aviation Time-of-Day Tariff (6 AM to 10 AM)		7.45			8				5.62	0.00				5.62	0.00	5.62						0.01	5.62	
HT-III - Aviation Time-of-Day Tariff (10 PM to 6 AM)		5.45			17				9.12	0.00				9.12	0.00	9.12						0.01	9.14	
HT -IV A Lift Irrigation & Agriculture	18	5.80	1980		1561		1450.41		905.25	287.18		0.07		1192.51	0.00	1192.51						1.21	1193.72	
HT-IV B - CP Water Supply Schemes	2	5.10			208		64.75		106.09	0.00		0.01		106.09	0.00	106.09						0.12	106.25	
HT-V (A) Railway/Traction	9	4.05	4680		194		95.50		78.75	44.69		0.04		123.48	0.00	123.48						0.15	123.63	
HT-V (B) HMR	4	3.95	4680		47		18.25		18.59	6.54		0.02		27.15	0.00	27.15						0.04	27.18	
HT-VI - Townships & Colony Supply		6.30	720						0.00	0.00				0.00	0.00	0.00	0.00	0.00				0.00	0.00	
HT-VII -Temporary Supply		9.80	6000						0.00	0.00				0.00	0.00	0.00	0.00	0.00				0.00	0.00	
HT- RESCOs									0.00	0.00				0.00	0.00	0.00	0.00	0.00				0.00	0.00	
HT-IX - Electric Vehicle Charging Stations		6.00							0.00	0.00				0.00	0.00	0.00	0.00	0.00				0.00	0.00	
HT-IX EV - Time-of-Day Tariff (6 PM to 10 PM)		7.00							0.00	0.00				0.00	0.00	0.00	0.00	0.00				0.00	0.00	
HT-IX EV - Time-of-Day Tariff (6 AM to 10 AM)		7.00							0.00	0.00				0.00	0.00	0.00	0.00	0.00				0.00	0.00	
HT-IX EV - Time-of-Day Tariff (10 PM to 6 AM)		5.00							0.00	0.00				0.00	0.00	0.00	0.00	0.00				0.00	0.00	
<b>TOTAL (LT + HT)</b>	<b>8869219</b>				<b>38587.86</b>	<b>0.00</b>	<b>19019.17</b>	<b>7347399.85</b>	<b>15646.17</b>	<b>2796.49</b>	<b>87.04</b>	<b>458.80</b>	<b>364.44</b>	<b>19352.94</b>	<b>0.00</b>	<b>19352.94</b>	<b>272.51</b>	<b>79.83</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>29.96</b>	<b>19735.25</b>	

Consumer Categories	No of consumers	Components of tariff			Relevant sales related data				Full year revenue excluding external subsidy					Incentives (Rs. Crs)	Net Revenue from Tariff (Rs. Crores)	Surcharge		Grid Support Charges (Rs. Crs)	Direct	Apportioned	Total Revenue (Net of incentives) (Rs. Crs)	Remarks		
		Energy Charges (Rs/kWh) or (Rs/kVAh)	Demand charges (Rs/kVA/yr)	Demand charges (Rs/HP/yr)	Energy Sales (MU)	Energy sales (MVAh)	Connected Load/ Contract Demand (MVA)	Connected Load/ Contract Demand (HP)	Energy Charges (Rs Crores)	Demand /Fixed charges (Rs Crores)	Minimum Charges (Rs Crores)	Customer Charges (Rs crores)	Others (Rs Crores)			Gross Tariff Revenue (Rs Crores)	Surcharge (Rs. Crs)						Additional Surcharge (Rs. Crs)	
<b>LT Total - (Existing Categories)</b>	<b>9594632</b>				<b>25235.19</b>	<b>0</b>	<b>13615.02</b>	<b>7745590</b>	<b>7482.62</b>	<b>333.96</b>	<b>77.59</b>	<b>458.43</b>	<b>17.42</b>	<b>8370.01</b>	<b>0</b>	<b>8370.01</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>33.39</b>	<b>8403.46</b>	
<b>Category- Domestic (All)</b>	<b>7121821</b>		<b>0.00</b>	<b>0.00</b>	<b>9335.59</b>	<b>0.00</b>	<b>10066.61</b>	<b>0.00</b>	<b>4020.79</b>	<b>0.00</b>	<b>55.57</b>	<b>325.06</b>	<b>-1.65</b>	<b>4399.77</b>	<b>0.00</b>	<b>4399.77</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.35</b>	<b>4412.12</b>	
<b>Cat (A) Domestic - upto 100 units/month</b>	<b>3758732</b>		<b>0.00</b>	<b>0.00</b>	<b>2128.25</b>	<b>0.00</b>	<b>3644.52</b>	<b>0.00</b>	<b>372.12</b>	<b>0.00</b>	<b>55.33</b>	<b>123.02</b>	<b>-1.65</b>	<b>548.81</b>		<b>548.81</b>				<b>0.00</b>	<b>0.00</b>	<b>2.82</b>	<b>551.63</b>	
0 - 50 units	2049697		1.45		1575.90		2023.94		228.51		53.33	61.49	-1.65	341.68		341.68						2.08	343.76	
51 - 100 units	1709035		2.60		552.35		1620.57		143.61		2.00	61.53		207.13		207.13						0.73	207.86	
<b>Cat (B) (i) Domestic -&gt;100 &amp; =200 units/month</b>	<b>2056675</b>		<b>0.00</b>	<b>0.00</b>	<b>3236.94</b>	<b>0.00</b>	<b>2819.97</b>	<b>0.00</b>	<b>1164.20</b>	<b>0.00</b> </														



Please Note:

Consumer Categories	No of consumers	Energy Charges (Rs/kWh) or (Rs/kVAh)	Demand charges (Rs/kVA/yr)	Demand charges (Rs/HP/yr)	Energy Sales (MVAh)	Energy sales (MVAh)	Connected Load/Contract Demand (MVA)	Connected Load/Contract Demand (HP)	Energy Charges (Rs Crores)	Demand /Fixed charges (Rs Crores)	Minimum Charges (Rs Crores)	Customer Charges (Rs crores)	Others (Rs Crores)	Gross Tariff Revenue (Rs Crores)	Incentives (Rs. Crs)	Net Revenue from Tariff (Rs. Crores)	Surcharge (Rs.Crs)	Additional Surcharge (Rs.Crs)	Grid Support Charges (Rs. Crs)	Direct	Apportioned	Total Revenue (Net of Incentives) (Rs. Crs)	Remarks		
<b>LT-II (B) &gt;50 Units/month</b>	<b>539626</b>				<b>2493.34</b>	<b>0</b>	<b>2431</b>	<b>0</b>	<b>2329.68</b>	<b>175.01</b>	<b>0.01</b>	<b>40.09</b>	<b>0</b>	<b>2544.80</b>		<b>2544.80</b>				<b>0</b>	<b>0.00</b>	<b>2544.10</b>			
0- 100 units	168529	7.50	720.00		426.76		270.47		320.07	19.47	0.01	11.11		350.66		350.66					0	0.00	350.66		
101- 300 units	208979	8.90	720.00		502.29		385.61		343.19	36.16	0.00	16.30		395.66		395.66						0	0.00	395.66	
301- 500 units	57417	9.40	720.00		242.51		242.14		227.96	17.43	0.00	4.48		249.88		249.88						0	0.00	249.88	
Above 500 units	105201	10.00	720.00		1438.46		1415.75		1438.46	101.93	0.00	8.21		1548.60		1548.60						0	0.00	1548.60	
<b>LT-II (C) Advertising Hoardings</b>	<b>1724</b>	<b>12.00</b>	<b>720.00</b>		<b>2.82</b>		<b>5.20</b>		<b>3.38</b>	<b>0.37</b>	<b>0.29</b>	<b>0.14</b>		<b>4.19</b>		<b>4.19</b>						<b>0.00</b>	<b>4.20</b>		
<b>LT-II(D) Hair Cutting Salons up to 200 units/month</b>	<b>10815</b>				<b>2.20</b>	<b>0</b>	<b>11.00</b>	<b>0</b>	<b>1.26</b>	<b>0.79</b>	<b>0.22</b>	<b>0.62</b>	<b>0</b>	<b>3</b>		<b>2.89</b>				<b>0</b>	<b>0.00</b>	<b>2.89</b>			
0 - 50 units	8501	5.30	720.00		1.87		8.63		0.83	0.62	0.22	0.46		2.13		2.13						0	0.00	2.13	
51 - 100 units	1609	6.60	720.00		0.48		1.59		0.32	0.11	0.00	0.11		0.54		0.54						0	0.00	0.54	
101 - 200 units	705	7.50	720.00		0.15		0.77		0.11	0.06	0.00	0.05		0.22		0.22						0	0.00	0.22	
<b>Category III - Industrial</b>	<b>44611</b>				<b>977.17</b>	<b>0.00</b>	<b>0.00</b>	<b>1323170.00</b>	<b>651.97</b>	<b>94.65</b>	<b>0.00</b>	<b>19.38</b>	<b>15.60</b>	<b>781.61</b>	<b>0.00</b>	<b>781.61</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.29</b>	<b>782.90</b>		
Category III - Industrial	44611				977.17	0.00	0.00	1323170.00	651.97	94.65	0.00	19.38	15.60	781.61	0.00	781.61	0.00	0.00	0.00	0.00	0.00	1.29	782.90		
Industrial Normal	41116	6.70		720.00	938.14			1271676.14	628.55	91.56		19.07	15.60	754.78		754.78						1.24	756.03		
Pisciculture/Prawn culture								0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						0.00	0.00		
Sugarcane crushing								0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						0.00	0.00		
Mushroom & Rabbit Farms	3495	6.00		600.00	39.03			51493.86	23.42	3.09		0.31		26.92		26.92						0.05	26.87		
Poultry Farms								0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						0.00	0.00		
Seasonal Industries								0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						0.00	0.00		
<b>Category IV - Cottage Industries</b>	<b>4410</b>				<b>8.98</b>	<b>0.00</b>	<b>0.00</b>	<b>17150.00</b>	<b>3.59</b>	<b>0.31</b>	<b>0.00</b>	<b>0.24</b>	<b>0.00</b>	<b>4.14</b>	<b>0.00</b>	<b>4.14</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>4.15</b>		
Cat -IV(A) - Cottage Industries	4410	4.00		240.00	8.98			17150.00	3.59	0.31	0.00	0.24	0.00	4.14	0.00	4.14	0.00	0.00	0.00	0.00	0.01	4.15			
Cat-IV(B) Agro Based Activity								0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						0.00	0.00		
<b>Category V (A&amp;B) - Agriculture</b>	<b>1262600</b>				<b>0</b>	<b>240</b>	<b>11724.36</b>	<b>0</b>	<b>6257330</b>	<b>7.57</b>	<b>0.03</b>	<b>0.00</b>	<b>38.68</b>	<b>-1</b>	<b>45.75</b>	<b>0</b>	<b>45.75</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15.51</b>	<b>61.26</b>		
Category V(A) - Agriculture (DSM Mandatory)	1262374				0	240	11723.06	0	6256996	7.06	0.00	0.00	38.68	-1	45.93	0	45.93	0	0	0	15.51	61.54			
Corporate Farmers	1927	2.50			28.21			10823.60	7.05	0.00	0.00		-0.70	6.35		6.35						0.04	6.39		
Other than Corporate Farmers	1260444	0.00			11694.85			6245272.00	0.00	0.00	0.00	38.68		38.68		38.68						15.47	54.15		
<b>LT-V(B) Others</b>	<b>229</b>				<b>0</b>	<b>240</b>	<b>1.29</b>	<b>0</b>	<b>1234</b>	<b>0.52</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>0.72</b>	<b>0</b>	<b>0.72</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0.72</b>			
Horticulture Nurseries with CL upto 15HP	229	4.00		240.00	1.29			1234.06	0.52	0.03	0.00	0.00	0.17	0.72		0.72						0.00	0.72		
<b>Category VI - Local Bodies, St. Lighting &amp; PWS</b>	<b>106561</b>				<b>0</b>	<b>462.19</b>	<b>0</b>	<b>167</b>	<b>147940</b>	<b>279.49</b>	<b>12.08</b>	<b>0.27</b>	<b>6.85</b>	<b>0</b>	<b>298.69</b>	<b>0.00</b>	<b>298.69</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>0.61</b>	<b>299.30</b>		
VI(A) - Street Lighting	72927				0	240.15	0	167	161.31	6.40	0.27	4.71	0	172.69		172.69						0.32	173.01		
Panchayats	33905	6.10	384.00		70.58		60.62		43.05	2.33	0.10	2.13		47.61		47.61						0.09	47.71		
Municipalities	10849	6.60	384.00		42.65		27.92		28.15	1.07	0.07	0.72		30.01		30.01						0.06	30.07		
Corporations	28173	7.10	384.00		126.92		78.16		90.11	3.00	0.09	1.86		95.07		95.07						0.17	95.23		
<b>VI(B) - PWS Schemes</b>	<b>33634</b>				<b>222.04</b>	<b>0</b>	<b>0</b>	<b>147940</b>	<b>118.17</b>	<b>5.68</b>	<b>0.00</b>	<b>2.14</b>	<b>0</b>	<b>126.00</b>		<b>126.00</b>					<b>0</b>	<b>0.29</b>	<b>126.29</b>		
Panchayats	24238	5.00		384.00	163.22			102465.74	81.61	3.93		1.58		87.13		87.13						0.22	87.34		
Municipalities	5790	6.10		384.00	45.99			26963.39	27.50	1.03	0.36	0.20		28.89		28.89						0.06	28.95		
Corporations	3906	6.60		384.00	13.73			18780.87	9.06	0.72	0.20	0.20		9.98		9.98						0.02	10.00		
<b>Category VII (A&amp;B) - General &amp; Religious</b>	<b>23724</b>				<b>0</b>	<b>61.33</b>	<b>0</b>	<b>65</b>	<b>43.35</b>	<b>1.65</b>	<b>0.50</b>	<b>1.71</b>	<b>0</b>	<b>47.21</b>	<b>0.00</b>	<b>47.21</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>0.08</b>	<b>47.30</b>			
Category VII A - General Purpose	19573	7.30	252.00		53.86		59.85		39.32	1.51	0.50	1.41		42.74		42.74						0.07	42.81		
Category VII B - Religious Purposes	4151				0	7.47	0	5.56	0	4.04	0.14	0.30	0	4.48		4.48					0	0.01	4.48		
CL up to 2 kW	4151	5.40	252.00		7.47			5.56	4.04	0.14	0.30	0.30		4.48		4.48						0.01	4.49		
CL above 2 kW		6.00	252.00					0.00	0.00	0.00	0.00	0.00		0.00		0.00						0.00	0.00		
<b>Category VIII-Temporary Supply</b>	<b>10536</b>				<b>0</b>	<b>82.40</b>	<b>0</b>	<b>88</b>	<b>90.64</b>	<b>2.21</b>	<b>1.81</b>	<b>0.92</b>	<b>4</b>	<b>99.46</b>	<b>0.00</b>	<b>99.46</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>0.11</b>	<b>99.56</b>		
All units	10536	11.00	252.00		82.40		87.51		90.64	2.21	1.81	0.92	3.88	99.46	0.00	99.46	0.00	0.00	0.00	0.00	0	0.11	99.56		
<b>Category IX-Electric Vehicle Charging Stations</b>	<b>53</b>	<b>6.00</b>	<b>0.00</b>		<b>0.13</b>		<b>0.87</b>		<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>0.08</b>	<b>0.00</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0.08</b>			
All units	53	6.00	0.00		0.13		0.87		0.08	0.00	0.00	0.00	0	0.08	0.00	0.08	0.00	0.00	0.00	0	0.00	0.08			
<b>New L T Categories ( Total )</b>	<b>0</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		
<b>TOTAL (LT including new categories)</b>	<b>9584632</b>	<b>0.00</b>	<b>0</b>	<b>0</b>	<b>25235.19</b>	<b>0.00</b>	<b>13615.02</b>	<b>7745590</b>	<b>7482.62</b>	<b>333.96</b>	<b>77.59</b>	<b>458.43</b>	<b>17.42</b>	<b>8370.01</b>	<b>0</b>	<b>8370.01</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>33.39</b>	<b>8403.40</b>		
<b>HIGH TENSION</b>	<b>13998</b>	<b>291.55</b>	<b>6880.00</b>	<b>0.00</b>	<b>17963.99</b>	<b>0.00</b>	<b>6085.76</b>	<b>0.00</b>	<b>11170.49</b>	<b>2388.64</b>	<b>0.00</b>	<b>24.10</b>	<b>15.35</b>	<b>13598.99</b>	<b>0.00</b>	<b>13598.99</b>	<b>171.66</b>	<b>47.30</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.63</b>	<b>13841.19</b>		
<b>HT Category at 11 kV</b>	<b>13216</b>				<b>593.06</b>	<b>0.00</b>	<b>2865.38</b>	<b>0.00</b>	<b>4191.97</b>	<b>1237.76</b>	<b>0.00</b>	<b>22.55&lt;/</b>													

Form 7

Total Revenue at Current Tariff and Charges

Please Note:

Consumer Categories	No of consumers	Energy Charges (Rs/kWh) or (Rs/kVAh)	Demand charges (Rs/kVA/yr)	Demand charges (Rs/HP/yr)	Energy Sales (MU)	Energy sales (MV/Ah)	Connected Load/ Contract Demand (MVA)	Connected Load/ Contract Demand (HP)	Energy Charges (Rs Crores)	Demand /Fixed charges (Rs Crores)	Minimum Charges (Rs Crores)	Customer Charges (Rs crores)	Others (Rs Crores)	Gross Tariff Revenue (Rs Crores)	Incentives (Rs. Crs)	Net Revenue from Tariff (Rs. Crores)	Surcharge (Rs. Crs)	Additional Surcharge (Rs. Crs)	Grid Support Charges (Rs. Crs)	Direct	Apportioned	Total Revenue (Net of incentives) (Rs. Crs)	Remarks
HT-IV A Lift Irrigation & Agriculture	160	6	1980		51		55		30	11				50.33	0	50.33	0	0	0	0	0	0.07	50.40
HT-IV B - CP Water Supply Schemes	138	5	0		144		40		73	0				73.69	0	73.69	0	0	0	0	0	0.19	73.88
HT-VI - Townships & Colony Supply	195	6	720		148		89		93	6				99.79	0	99.79	0	0	0	0	0	0.20	99.99
HT - VII - Temporary Supply	617	11	6000		126		125		137	75				212.52	0	212.52	0	0	0	0	0	0.17	212.69
HT- RESCOs														0.00	0	0.00	0	0	0	0	0	0.00	0.00
HT IX - Electric Vehicle Charging Stations	3	6	0		3		3		2	0				2.07	0	2.07	0	0	0	0	0	0.00	2.07
HT-IX EV - Time-of-Day Tariff (6 PM to 10 PM)														0.00	0	0.00	0	0	0	0	0	0.00	0.00
HT-IX EV - Time-of-Day Tariff (6 AM to 10 AM)														0.00	0	0.00	0	0	0	0	0	0.00	0.00
HT-IX EV - Time-of-Day Tariff (10 PM to 6 AM)														0.00	0	0.00	0	0	0	0	0	0.00	0.00
<b>HT Category at 33 IV</b>	<b>696</b>	<b>131</b>	<b>32100</b>	<b>0</b>	<b>5876</b>	<b>0</b>	<b>1658</b>	<b>0</b>	<b>3828</b>	<b>720</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4549</b>	<b>0</b>	<b>4549</b>	<b>98</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>4680</b>
HT-I Indt Segregated	465	6	4680		1364		1140		838	534				1373.45	0	1373.45	911	28	0	0	0	1.81	1492.56
HT-I Indt. Time-of-Day Tariff (6 PM to 10 PM)	0	7	0		891		0		837	0				837.37	0	837.37	0	0	0	0	0	1.18	838.55
HT-I Indt. Time-of-Day Tariff (6 AM to 10 AM)	0	7	0		740		0		526	0				526.78	0	526.78	0	0	0	0	0	0.98	529.76
HT-I Indt. Time-of-Day Tariff (10 PM to 6 AM)	0	6	0		1588		0		975	0				975.16	0	975.16	0	0	0	0	0	2.10	977.26
Lights & Fans	0	0	0		0		0		0	0				0.00	0	0.00	0	0	0	0	0	0.00	0.00
Poultry Farms	4	6	4680		3		8		2	4				5.76	0	5.76	0	0	0	0	0	0.00	5.76
Poultry Farms Time-of-Day Tariff (6 PM to 10 PM)	0	7	0		2		0		1	0				1.25	0	1.25	0	0	0	0	0	0.00	1.26
Poultry Farms Time-of-Day Tariff (6 AM to 10 AM)	0	7	0		1		0		1	0				0.93	0	0.93	0	0	0	0	0	0.00	0.93
Poultry Farms Time-of-Day Tariff (10 PM to 6 AM)	0	5	0		3		0		2	0				1.80	0	1.80	0	0	0	0	0	0.00	1.80
Colony consumption	0	6	0		0		0		0	0				0.00	0	0.00	0	0	0	0	0	0.00	0.00
Seasonal Industries	0	6	0		2		0		1	0				1.16	0	1.16	0	0	0	0	0	0.00	1.16
HT-I HMM/SSB	4	4	4680		57		10		23	5				27.39	0	27.39	0	0	0	0	0	0.08	27.45
HT - I (B) Ferro-alloys	5	6	0		37		21		20	0				20.45	0	20.45	0	0	0	0	0	0.05	20.50
HT-II -Others	155	7	4680		310		329		217	154				371.47	0	371.47	6	0	0	0	0	0.41	378.18
HT-II Others - Time-of-Day Tariff (6 PM to 10 PM)	0	8	0		146		0		117	0				116.87	0	116.87	0	0	0	0	0	0.19	117.06
HT-II Others - Time-of-Day Tariff (6 AM to 10 AM)	0	6	0		123		0		99	0				98.65	0	98.65	0	0	0	0	0	0.16	98.82
HT-II Others - Time-of-Day Tariff (10 PM to 6 AM)	0	6	0		205		0		123	0				123.00	0	123.00	0	0	0	0	0	0.27	123.27
HT-III: Airports, Bus Stations and Railway Stations	0	7	4680		0		0		0	0				0.00	0	0.00	0	0	0	0	0	0.00	0.00
HT-III - Aviation Time-of-Day Tariff (6 PM to 10 PM)	0	0	0		0		0		0	0				0.00	0	0.00	0	0	0	0	0	0.00	0.00
HT-III - Aviation Time-of-Day Tariff (6 AM to 10 AM)	0	0	0		0		0		0	0				0.00	0	0.00	0	0	0	0	0	0.00	0.00
HT-III - Aviation Time-of-Day Tariff (10 PM to 6 AM)	0	0	0		0		0		0	0				0.00	0	0.00	0	0	0	0	0	0.00	0.00
HT-IV A Lift Irrigation & Agriculture	20	6	1980		19		40		11	6				18.99	0	18.99	0	0	0	0	0	0.02	18.97
HT-IV B - CP Water Supply Schemes	14	5	0		241		41		123	0				122.89	0	122.89	0	0	0	0	0	0.32	123.20
HT-VI - Townships & Colony Supply	20	6	720		100		47		63	3				66.24	0	66.24	0	0	0	0	0	0.13	66.37
HT - VII - Temporary Supply	9	10	6000		45		21		45	12				57.22	0	57.22	0	0	0	0	0	0.06	57.28
HT- RESCOs														0.00	0	0.00	0	0	0	0	0	0.00	0.00
HT IX - Electric Vehicle Charging Stations														0.00	0	0.00	0	0	0	0	0	0.00	0.00
HT-IX EV - Time-of-Day Tariff (6 PM to 10 PM)														0.00	0	0.00	0	0	0	0	0	0.00	0.00
HT-IX EV - Time-of-Day Tariff (6 AM to 10 AM)														0.00	0	0.00	0	0	0	0	0	0.00	0.00
HT-IX EV - Time-of-Day Tariff (10 PM to 6 AM)														0.00	0	0.00	0	0	0	0	0	0.00	0.00
<b>HT Category at 132 IV</b>	<b>88</b>	<b>161</b>	<b>36780</b>	<b>0</b>	<b>6096</b>	<b>0</b>	<b>1663</b>	<b>0</b>	<b>3151</b>	<b>431</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3682</b>	<b>0</b>	<b>3682</b>	<b>71</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>3682</b>
HT-I Indt Segregated	39	6	4680		585		514		331	240				571.27	0	571.27	71	21	0	0	0	0.77	664.40
HT-I Indt. Time-of-Day Tariff (6 PM to 10 PM)	0	7	0		418		0		278	0				278.14	0	278.14	0	0	0	0	0	0.55	278.70
HT-I Indt. Time-of-Day Tariff (6 AM to 10 AM)	0	7	0		305		0		203	0				202.74	0	202.74	0	0	0	0	0	0.40	203.14
HT-I Indt. Time-of-Day Tariff (10 PM to 6 AM)	0	5	0		779		0		362	0				362.01	0	362.01	0	0	0	0	0	1.03	363.04
Lights & Fans	0	0	0		0		0		0	0				0.00	0	0.00	0	0	0	0	0	0.00	0.00
Colony consumption	0	6	0		5		0		3	0				2.91	0	2.91	0	0	0	0	0	0.01	2.92
Seasonal Industries	0	7	4680		0		0		0	0				0.00	0	0.00	0	0	0	0	0	0.00	0.00
HT-I HMM/SSB	6	4	0		1096		129		433	0				432.91	0	432.91	0	0	0	0	0	1.45	434.36
HT - I (B) Ferro-alloys	3	5	0		215		62		107	0				107.49	0	107.49	0	0	0	0	0	0.28	107.77
HT-II -Others	4	7	4680		21		18		14	8				22.28	0	22.28	0	0	0	0	0	0.03	22.28
HT-II Others - Time-of-Day Tariff (6 PM to 10 PM)	0	0	0		6		0		5	0				4.81	0	4.81	0	0	0	0	0	0.01	4.83
HT-II Others - Time-of-Day Tariff (6 AM to 10 AM)	0	8	0		6		0		5	0				5.01	0	5.01	0	0	0	0	0	0.01	5.02
HT-II Others - Time-of-Day Tariff (10 PM to 6 AM)	0	0	0		10		0		6	0				5.66	0	5.66	0	0	0	0	0	0.01	5.67
HT-III: Airports, Bus Stations and Railway Stations	1	6	4680		13		11		9	5				13.79	0	13.79	0	0	0	0	0	0.02	13.81
HT-III - Aviation Time-of-Day Tariff (6 PM to 10 PM)	0	7	0		10		0		8	0				7.64	0	7.64	0	0	0	0	0	0.01	7.65
HT-III - Aviation Time-of-Day Tariff (6 AM to 10 AM)	0	7	0		7		0		5	0				5.27	0	5.27	0	0	0	0	0	0.01	5.28
HT-III - Aviation Time-of-Day Tariff (10 PM to 6 AM)	0	5	0		17		0		9	0				9.16	0	9.16	0	0	0	0	0	0.02	9.19
HT -IV A Lift Irrigation & Agriculture	18	6	1980		1895		725		1099	144				1242.54	0	1242.54	0	0	0	0	0	2.51	1245.05
HT-IV B - CP Water Supply Schemes	2	5	0		248		32		126	0				126.90	0	126.90	0	0	0	0	0	0.33	126.83
HT-V (A) Railway/Traction	9	4	4680		303		54		123	25				147.81	0	147.81	0	0	0	0	0	0.40	148.01
HT-V (B) HMR	4	4	4680		66		18		26	0													

Please Note:

Consumer Categories	No of consumers	Energy Charges (Rs/kWh) or (Rs/kVAh)	Demand charges (Rs/kVA/yr)	Demand charges (Rs/HP/yr)	Energy Sales (MU)	Energy sales (MVAh)	Connected Load/ Contract Demand (MVA)	Connected Load/ Contract Demand (HP)	Energy Charges (Rs Crores)	Demand /Fixed charges (Rs Crores)	Minimum Charges (Rs Crores)	Customer Charges (Rs Crores)	Others (Rs Crores)	Gross Tariff Revenue (Rs Crores)	Incentives (Rs. Crs)	Net Revenue from Tariff (Rs. Crores)	Surcharge (Rs. Crs)	Additional Surcharge (Rs.Crs)	Grid Support Charges (Rs. Crs)	Direct	Apportioned	Total Revenue (Net of Incentives) (Rs. Crs)	Remarks
0 - 50 units	225944	1.95	10.00		1664		2309	0	324.52	28		103.43	0	455.99	0		0	0	0	0	0	0.95	0.95
51 - 100 units	1942128	3.10	10.00		567		2032	0	175.76	24		153.35	0	353.52	0		0	0	0	0	0	0.32	0.32
<b>Cat I (B) (i) Domestic -&gt;100 &amp; =200 units/month</b>	<b>223970</b>			<b>0.00</b>	<b>3386.26</b>	<b>0.00</b>	<b>3510.61</b>	<b>0.00</b>	<b>1291.00</b>	<b>42.13</b>	<b>0.00</b>	<b>232.00</b>	<b>0.00</b>	<b>1565.12</b>					<b>0.00</b>		<b>1.93</b>	<b>1.93</b>	
0 - 100 units	0	3.40	10.00		2389		0	0	812.13	0		0.00	0	812.13	0		0	0	0	0	0	1.36	1.36
101 - 200 units	223970	4.80	10.00		998		3511	0	478.86	42		232.00	0	752.96	0		0	0	0	0	0	0.57	0.57
<b>Cat I (B) (ii) Domestic -&gt;200 units/month</b>	<b>1078168</b>			<b>0.00</b>	<b>4360.36</b>	<b>0.00</b>	<b>3162.00</b>	<b>0.00</b>	<b>2895.18</b>	<b>37.94</b>	<b>0.00</b>	<b>160.97</b>	<b>0.00</b>	<b>3094.09</b>					<b>0.00</b>		<b>2.49</b>	<b>2.49</b>	
0 - 200 units	0	5.10	10.00		2482		0	0	1271.00	0		0.00	0	1271.00	0		0	0	0	0	0	1.42	1.42
201 - 300 units	697845	7.70	10.00		899		1666	0	622.86	28		85.76	0	728.41	0		0	0	0	0	0	0.46	0.46
301 - 400 units	210339	9.00	10.00		361		645	0	325.08	6		0	0	328.42	0		0	0	0	0	0	0.21	0.21
401 - 800 units	140997	9.50	10.00		438		577	0	416.40	7		32.31	0	455.64	0		0	0	0	0	0	0.25	0.25
More than 800 units	29187	10.00	10.00		260		274	0	260.05	3		7.28	0	270.62	0		0	0	0	0	0	0.15	0.15
<b>Category II (A, B, C &amp; D) - Non-domestic/Commercial</b>	<b>1072659</b>			<b>0</b>	<b>3050</b>	<b>0.00</b>	<b>3511</b>	<b>0</b>	<b>3089.98</b>	<b>284</b>	<b>0</b>	<b>102.86</b>	<b>0.00</b>	<b>3477.00</b>	<b>0.00</b>	<b>3477.00</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.74</b>	<b>3478.75</b>
<b>Category II - Non-domestic/Commr (A &amp; B)</b>	<b>1058994</b>			<b>0</b>	<b>3043</b>	<b>0.00</b>	<b>3494</b>	<b>0</b>	<b>3083.02</b>	<b>283</b>	<b>0</b>	<b>101.97</b>	<b>0.00</b>	<b>3467.80</b>	<b>0.00</b>	<b>3467.80</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.74</b>	<b>3469.54</b>
<b>LT-II (A) Upto 50 units/month</b>	<b>519420</b>		<b>600</b>	<b>0</b>	<b>94</b>	<b>0.00</b>	<b>888</b>	<b>0</b>	<b>65.53</b>	<b>64</b>	<b>0</b>	<b>29.32</b>	<b>0.00</b>	<b>158.75</b>	<b>0</b>							<b>0.05</b>	<b>0.05</b>
0-50 units	519420	7.00	60.00		94		888	0	65.53	64		29.32	0	158.75	0		0	0	0	0	0	0.05	0.05
<b>LT-II (B) &gt;50 Units/month</b>	<b>539573</b>			<b>0</b>	<b>2949</b>	<b>0.00</b>	<b>2606</b>	<b>0</b>	<b>3917.49</b>	<b>219</b>	<b>0</b>	<b>72.66</b>	<b>0.00</b>	<b>3309.05</b>								<b>1.69</b>	<b>1.69</b>
0-100 units	176652	8.50	70.00		592		299	0	502.98	25		18.65	0	546.74	0		0	0	0	0	0	0.34	0.34
101- 300 units	208383	9.90	70.00		555		548	0	549.22	46		26.29	0	621.54	0		0	0	0	0	0	0.32	0.32
301- 500 units	55138	10.40	70.00		298		261	0	309.65	22		8.10	0	339.68	0		0	0	0	0	0	0.17	0.17
Above 500 units	99101	11.00	70.00		1505		1498	0	1655.63	126		19.61	0	1801.09	0		0	0	0	0	0	0.86	0.86
<b>LT-II(C) Advertising Hoardings</b>	<b>1899</b>				<b>4</b>		<b>6</b>		<b>4.81</b>	<b>0</b>		<b>0.35</b>	<b>0</b>	<b>5.64</b>	<b>0</b>	<b>5.64</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>5.64</b>
1899	1899	13.00	70.00		4		6	0	4.81	0		0.35	0	5.64	0	5.64	0	0	0	0	0	0.00	5.64
<b>LT-II(D) Hair Cutting Salons up to 200 units/month</b>	<b>11766</b>			<b>0</b>	<b>4</b>	<b>0.00</b>	<b>12</b>	<b>0</b>	<b>2.15</b>	<b>1</b>	<b>0</b>	<b>0.54</b>	<b>0.00</b>	<b>3.56</b>	<b>0</b>	<b>3.56</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>3.56</b>
0 - 50 units	8862	5.30	60.00		3		9	0	1.37	1		0.42	0	2.45	0		0	0	0	0	0	0.00	0.00
51 - 100 units	1860	6.60	60.00		1		2	0	0.56	0		0.08	0	0.78	0		0	0	0	0	0	0.00	0.00
101 - 200 units	944	7.50	60.00		0		1	0	0.22	0		0.04	0	0.33	0		0	0	0	0	0	0.00	0.00
<b>Category III - Industrial</b>	<b>45288</b>			<b>215.00</b>	<b>933.39</b>	<b>0.00</b>	<b>0.00</b>	<b>1365723.55</b>	<b>716.20</b>	<b>122.29</b>	<b>0.00</b>	<b>19.43</b>	<b>0.00</b>	<b>857.92</b>	<b>0.00</b>	<b>857.92</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.53</b>	<b>858.45</b>
<b>Category III - Industrial</b>	<b>45288</b>			<b>215.00</b>	<b>933.39</b>	<b>0.00</b>	<b>0.00</b>	<b>1365723.55</b>	<b>716.20</b>	<b>122.29</b>	<b>0.00</b>	<b>19.43</b>	<b>0.00</b>	<b>857.92</b>	<b>0.00</b>	<b>857.92</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.53</b>	<b>858.45</b>
Industrial Normal	41753	7.70		75.00	897			1313383	691.07	118		17.91	0	827.19	0		0	0	0	0	0	0.51	0.51
Pisciculture/Prawn culture														0.00								0.00	0.00
Sugarcane crushing														0.00								0.00	0.00
Poultry farms	3535	7.00		65.00	36		0	52340	25.13	4		1.52	0	30.73	0		0	0	0	0	0	0.02	0.02
Mushroom & Rabbit Farms	0	7.30		75.00	0	0.00	0	0	0.00	0		0.00	0	0.00	0		0	0	0	0	0	0.00	0.00
Seasonal Industries														0.00								0.00	0.00
<b>Category IV - Cottage Industries</b>	<b>4549</b>			<b>40.00</b>	<b>9.50</b>	<b>0.00</b>	<b>0.00</b>	<b>17804.46</b>	<b>3.80</b>	<b>0.43</b>	<b>0.00</b>	<b>0.27</b>	<b>0.00</b>	<b>4.49</b>	<b>0.00</b>	<b>4.49</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>4.50</b>
<b>Cat -IV(A) - Cottage Industries</b>	<b>4549</b>			<b>40.00</b>	<b>20.00</b>	<b>20.00</b>	<b>9</b>	<b>0</b>	<b>17804</b>	<b>3.80</b>	<b>0</b>	<b>0.27</b>	<b>0</b>	<b>4.49</b>	<b>0</b>							<b>0.01</b>	<b>0.01</b>
0-50 units	4	4.00	20.00		20.00		9	0	0.00	0		0.00	0	0.00	0		0	0	0	0	0	0.01	0.01
51-100 units	0	4.00	20.00		0		0	0	0.00	0		0.00	0	0.00	0		0	0	0	0	0	0.00	0.00
<b>Category V (A&amp;B) - Agriculture</b>	<b>1319581</b>			<b>0</b>	<b>20</b>	<b>11030.35</b>	<b>0.00</b>	<b>0</b>	<b>6541905</b>	<b>8.47</b>	<b>0</b>	<b>46.48</b>	<b>0.00</b>	<b>54.98</b>	<b>0</b>	<b>54.98</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6.30</b>	<b>61.28</b>
<b>Category V(A) - Agriculture (DSM Mandatory)</b>	<b>1319309</b>			<b>0</b>	<b>0</b>	<b>11030.35</b>	<b>0.00</b>	<b>0</b>	<b>6540446</b>	<b>7.72</b>	<b>0</b>	<b>46.47</b>	<b>0.00</b>	<b>54.19</b>	<b>0</b>							<b>6.30</b>	<b>6.30</b>
Corporate Farmers	1995	2.50	0.00	0.00	31		0	10824	7.72	0		0.07	0	7.80	0		0	0	0	0	0	0.02	0.02
Other than Corporate Farmers	1317314	0.00	0.00	0.00	10999		0	6529622	0.00	0		46.40	0	46.40	0		0	0	0	0	0	6.28	6.28
<b>LT-V(B) Others</b>	<b>242</b>			<b>0</b>	<b>20</b>	<b>2</b>	<b>0.00</b>	<b>0</b>	<b>1359</b>	<b>0.74</b>	<b>0</b>	<b>0</b>	<b>0.01</b>	<b>0.00</b>	<b>0.79</b>	<b>0</b>					<b>0</b>	<b>0.00</b>	
242	242	4.00		20.00	2		0	1359	0.74	0		0.01	0	0.79	0		0	0	0	0	0	0.00	0.00
Horticulture Nurseries with CL upto 15HP														0.00								0.00	0.00
<b>Category VI - Local Bodies, St. Lighting &amp; PWS</b>	<b>116666</b>			<b>96</b>	<b>470</b>	<b>0.00</b>	<b>172</b>	<b>153030</b>	<b>371.56</b>	<b>12</b>	<b>0</b>	<b>16.07</b>	<b>0.00</b>	<b>360.10</b>	<b>0.00</b>	<b>360.10</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>0.27</b>	<b>360.37</b>
<b>VI(A) - Street Lighting</b>	<b>79842</b>			<b>0</b>	<b>246</b>	<b>0.00</b>	<b>172</b>	<b>0</b>	<b>189.61</b>	<b>7</b>	<b>0</b>	<b>11.00</b>	<b>0.00</b>	<b>207.20</b>	<b>0</b>							<b>0.14</b>	<b>0.14</b>
Panchayats	37120	7.10	32.00		73		63	0	52.02	2		5.11	0	59.54	0		0	0	0	0	0	0.04	0.04
Municipalities	11878	7.60	32.00		46		29	0	34.66	1		1.64	0	37.40	0		0	0	0	0	0	0.03	0.03
Corporations	30845	8.10	32.00		127		80	0	102.94	3		4.25	0	110.26	0		0	0	0	0	0	0.07	0.07
<b>VI(B) - PWS Schemes</b>	<b>36823</b>			<b>0</b>	<b>96</b>	<b>224</b>	<b>0.00</b>	<b>0</b>	<b>153030</b>	<b>141.96</b>	<b>6</b>	<b>0</b>	<b>5.07</b>	<b>0.00</b>	<b>152.99</b>	<b>0</b>						<b>0.13</b>	<b>0.13</b>
Panchayats	26536																						



Please Note:

Consumer Categories	No of consumers	Energy Charges (Rs/kWh) or (Rs/kVAh)	Demand charges (Rs/kVA/yr)	Demand charges (Rs/HP/yr)	Energy Sales (MU)	Energy sales (MVAh)	Connected Load/ Contract Demand (MVA)	Connected Load/ Contract Demand (HP)	Energy Charges (Rs Crores)	Demand /Fixed charges (Rs Crores)	Minimum Charges (Rs Crores)	Customer Charges (Rs crores)	Others (Rs Crores)	Gross Tariff Revenue (Rs Crores)	Incentives (Rs. Crs)	Net Revenue from Tariff (Rs. Crores)	Surcharge (Rs.Crs)	Additional Surcharge (Rs.Crs)	Grid Support Charges (Rs. Crs)	Direct	Apportioned	Total Revenue (Net of incentives) (Rs.Crs)	Remarks		
2023-24																									
Consumer Categories	No of consumers	Components of tariff			Relevant sales related data				Full year revenue excluding external subsidy					Incentives (Rs. Crs)	Net Revenue from Tariff (Rs. Crores)	Surcharge (Rs. Crores)			Grid Support Charges (Rs. Crs)	Direct	Apportioned	Total Revenue (Net of incentives) (Rs.Crs)	Remarks		
		Energy Charges (Rs/kWh) or (Rs/kVAh)	Demand charges (Rs/kVA/yr)	Demand charges (Rs/HP/yr)	Energy Sales (MU)	Energy sales (MVAh)	Connected Load/ Contract Demand (MVA)	Connected Load/ Contract Demand (HP)	Energy Charges (Rs Crores)	Demand /Fixed charges (Rs Crores)	Minimum Charges (Rs Crores)	Customer Charges (Rs Crores)	Others (Rs Crores)			Gross Tariff Revenue (Rs Crores)	Surcharge (Rs.Crs)	Additional Surcharge (Rs.Crs)						Grid Support Charges (Rs. Crs)	
<b>LT Total - (Existing Categories)</b>	<b>10704665</b>				<b>26286.17</b>	<b>0.00</b>	<b>16199.47</b>	<b>8412574.12</b>	<b>9663.53</b>	<b>716.11</b>	<b>0.00</b>	<b>874.94</b>	<b>0.00</b>	<b>11254.88</b>	<b>0.00</b>	<b>11254.88</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.15</b>	<b>11268.73</b>		
<b>Category - Domestic (All)</b>	<b>7970976</b>		<b>0.00</b>		<b>10547.46</b>	<b>0.00</b>	<b>12051.11</b>	<b>0.00</b>	<b>4954.01</b>	<b>144.81</b>	<b>0.00</b>	<b>876.49</b>	<b>0.00</b>	<b>5775.11</b>	<b>0.00</b>	<b>5775.11</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.88</b>	<b>5780.79</b>		
<b>Cat (A) Domestic - upto 100 units/month</b>	<b>4454184</b>				<b>20.00</b>	<b>0.00</b>	<b>4750.36</b>	<b>0.00</b>	<b>828.86</b>	<b>37.00</b>	<b>0.00</b>	<b>279.76</b>	<b>0.00</b>	<b>865.63</b>	<b>0.00</b>	<b>865.63</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.27</b>	<b>866.90</b>		
0 - 50 units	2395354	2	10	10	1759		2527		343	30		112		485		485							0.95		
51 - 100 units	2058650	3	10	10	599		2224		198	27		68		381		381							0.32		
<b>Cat I (B) (i) Domestic - &gt;100 &amp; =200 units/month</b>	<b>2373939</b>				<b>20.00</b>	<b>0.00</b>	<b>3841.09</b>	<b>0.00</b>	<b>1364.70</b>	<b>46.09</b>	<b>0.00</b>	<b>249.13</b>	<b>0.00</b>	<b>1660</b>	<b>0</b>	<b>1660</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0.00</b>	<b>1.93</b>	<b>1661.93</b>		
0 - 100 units	0	3	10	10	2525				858	0		0		858		858							1.36		
101 - 200 units	2373939	5	10	10	1055		3641		506	46		249		901		901							0.57		
<b>Cat I (B) (ii) Domestic - &gt;200 units/month</b>	<b>1142853</b>				<b>50.00</b>	<b>0.00</b>	<b>3459.86</b>	<b>0.00</b>	<b>3960.86</b>	<b>41.98</b>	<b>0.00</b>	<b>147.60</b>	<b>0.00</b>	<b>3280</b>	<b>0</b>	<b>3280</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.48</b>	<b>3282.08</b>		
0 - 200 units	0	5	10	10	2634				1344	0		0		1344		1344							1.42		
201 - 300 units	739501	8	10	10	855		1823		698	22		86		766		766							0.46		
301 - 400 units	222958	9	10	10	382		706		344	8		31		383		383							0.21		
401 - 800 units	149457	10	10	10	463		631		440	8		24		472		472							0.25		
More than 800 units	30937	10	10	10	275		300		275	4		6		284		284							0.15		
<b>Category II (A, B, C &amp; D) - Non-domestic/Commercial</b>	<b>1138948</b>				<b>590</b>	<b>0.00</b>	<b>3485</b>	<b>0.00</b>	<b>3529.99</b>	<b>309</b>	<b>0.00</b>	<b>107.77</b>	<b>0.00</b>	<b>3946.88</b>	<b>0</b>	<b>3947</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.88</b>	<b>3948.76</b>		
<b>Category II - Non-domestic/Commf (A &amp; B)</b>	<b>1124340</b>				<b>340</b>	<b>0.00</b>	<b>3476</b>	<b>0.00</b>	<b>3822.04</b>	<b>308</b>	<b>0.00</b>	<b>106.69</b>	<b>0.00</b>	<b>3936</b>	<b>0</b>	<b>3936</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.87</b>	<b>3938.25</b>		
<b>LT - II (A) Upto 50 units/month</b>	<b>551471</b>		<b>600</b>		<b>60</b>	<b>0.00</b>	<b>107</b>	<b>0.00</b>	<b>966</b>	<b>70</b>	<b>0</b>	<b>32.13</b>	<b>0.00</b>	<b>177</b>	<b>0</b>	<b>177</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.06</b>	<b>176.56</b>		
0-50 units	551471	7	60	60	107		966		75	70		32		177		177							0.06	177	
<b>LT - II (B) &gt;50 Units/month</b>	<b>572869</b>				<b>280</b>	<b>0.00</b>	<b>3369</b>	<b>0.00</b>	<b>3447.18</b>	<b>238</b>	<b>0.00</b>	<b>74.57</b>	<b>0.00</b>	<b>3760</b>	<b>0</b>	<b>3760</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.81</b>	<b>3761.68</b>		
0- 100 units	187871	9	70	70	676		325		675	27		20		622		622							0.36	622	
101 - 300 units	221242	10	70	70	634		596		527	50		27		705		705							0.34	705	
301 - 500 units	38540	10	70	70	340		284		354	24		8		388		388							0.18	388	
Above 500 units	105216	11	70	70	1719		1630		1891	137		20		2048		2048							0.93	2048	
<b>LT-II (C) Advertising Hoardings</b>	<b>2016</b>				<b>13</b>	<b>0.00</b>	<b>70</b>	<b>4.23</b>	<b>6</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>6</b>		
<b>LT-II(D) Hair Cutting Salons up to 200 units/month</b>	<b>12492</b>				<b>180</b>	<b>4.26</b>	<b>0.00</b>	<b>13</b>	<b>2.46</b>	<b>1</b>	<b>0</b>	<b>0.70</b>	<b>0.00</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>4.10</b>		
0 - 50 units	9515	5	60	60	3		0		2	1		0		3		3							0.00	3	
51 - 100 units	1975	7	60	60	1		2		1	0		0		1		1							0.00	1	
101 - 200 units	1002	8	60	60	0		0		0	0		0		0		0							0.00	0	
<b>Category III - Industrial</b>	<b>45976</b>				<b>140.00</b>	<b>980.06</b>	<b>0.00</b>	<b>0.00</b>	<b>1409645.64</b>	<b>752.01</b>	<b>126.23</b>	<b>0.00</b>	<b>19.73</b>	<b>0.00</b>	<b>899</b>	<b>0</b>	<b>899</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.53</b>	<b>898.48</b>		
<b>Category III - Industrial</b>	<b>45976</b>				<b>140.00</b>	<b>980.06</b>	<b>0.00</b>	<b>0.00</b>	<b>1409645.64</b>	<b>752.01</b>	<b>126.23</b>	<b>0.00</b>	<b>19.73</b>	<b>0.00</b>	<b>899</b>	<b>0</b>	<b>899</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.53</b>	<b>898.48</b>		
Industrial Normal	42388	8	75	75	942		0		135622	726		122		866		866							0.51	866	
Pisciculture/Prawn culture														0		0							0.00	0	
Sugarcane crushing														0		0							0.00	0	
Poultry farms	3588	7	65	65	38		0		54023	26		4		32		32							0.02	32	
Mushroom & Rabbit Farms									0.00	0		0		0		0							0.00	0	
Seasonal Industries														0		0							0.00	0	
<b>Category IV - Cottage Industries</b>	<b>4692</b>				<b>40.00</b>	<b>10.04</b>	<b>0.00</b>	<b>0.00</b>	<b>18483.89</b>	<b>4.02</b>	<b>0.44</b>	<b>0.00</b>	<b>0.28</b>	<b>0.00</b>	<b>4.74</b>	<b>0</b>	<b>4.74</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.74</b>	
Cat -IV(A) - Cottage Industries	4692	4	20	20	10		0		18484	4		0		5		5							0.01	5	
Cat-IV(B) Agro Based Activity	0	4	20	20	0		0		0	0		0		0		0							0.00	0	
<b>Category V (A&amp;B) - Agriculture</b>	<b>1376421</b>				<b>0</b>	<b>20</b>	<b>10591</b>	<b>0.00</b>	<b>0</b>	<b>6826155</b>	<b>8.13</b>	<b>0</b>	<b>0</b>	<b>48.53</b>	<b>0.00</b>	<b>57</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5.70</b>	<b>62.38</b>		
<b>Category V(A) - Agriculture (DSM Mandatory)</b>	<b>1376179</b>				<b>0</b>	<b>0</b>	<b>10589.14</b>	<b>0.00</b>	<b>0</b>	<b>6824796</b>	<b>7.42</b>	<b>0</b>	<b>0</b>	<b>48.52</b>	<b>0.00</b>	<b>56</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5.70</b>	<b>61.63</b>		
Corporate Farmers	1995	3	0	0	30		0		10824	7		0		7		7							0.02	7	
Other than Corporate Farmers	1374184	0	0	0	10559		0		6813972	0		0		48		48							5.68	1374184	
<b>LT-V(B) Others</b>	<b>242</b>				<b>0</b>	<b>20</b>	<b>2</b>	<b>0.00</b>	<b>0</b>	<b>1359</b>	<b>0.71</b>	<b>0</b>	<b>0.01</b>	<b>0.00</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0.76</b>		
Horticulture Nurseries with CL upto 15HP	242	4	20	20	2		0		1359	1		0		1		1							0.00	1	
<b>Category VI - Local Bodies, St. Lighting &amp; PWS</b>	<b>126940</b>				<b>192</b>	<b>480</b>	<b>0.00</b>	<b>178</b>	<b>158290</b>	<b>338.19</b>	<b>18</b>	<b>0</b>	<b>17.54</b>	<b>0.00</b>	<b>369</b>	<b>0</b>	<b>369</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>0.26</b>	<b>368.89</b>		
<b>VI(A) - Street Lighting</b>	<b>86874</b>				<b>96</b>	<b>251</b>	<b>0.00</b>	<b>178</b>	<b>0</b>	<b>193.40</b>	<b>7</b>	<b>0</b>	<b>12.00</b>	<b>0.00</b>	<b>212</b>	<b>0</b>	<b>212</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>0.14</b>	<b>212.36</b>		
Panchayats	40389	7	32	32	75		65		33	2		6		61		61							0.04	61	
Municipalities	12524	8	32	32	47		30		35	11		2		38		38		</							

Form 7

Total Revenue at Current Tariff and Charges

Please Note:

Consumer Categories	No of consumers	Energy Charges (Rs/kWh) or (Rs/kVAh)	Demand charges (Rs/kVA/yr)	Demand charges (Rs/HP/yr)	Energy Sales (MU)	Energy sales (MVAh)	Connected Load/ Contract Demand (MVA)	Connected Load/ Contract Demand (HP)	Energy Charges (Rs Crores)	Demand /Fixed charges (Rs Crores)	Minimum Charges (Rs Crores)	Customer Charges (Rs Crores)	Others (Rs Crores)	Gross Tariff Revenue (Rs Crores)	Incentives (Rs. Crs)	Net Revenue from Tariff (Rs. Crores)	Surcharge (Rs.Crs)	Additional Surcharge (Rs.Crs)	Grid Support Charges (Rs. Crs)	Direct	Apportioned	Total Revenue (Net of Incentives) (Rs. Crs)	Remarks	
HT-I Indr. Time-of-Day Tariff (10 PM to 6 AM)	0	7	0	0	1331.84	0	0	0	886	0	0	0	0	886	0	886	0	0	0	0	0	0.72	1212	
HT-I (A) Optional Cat. with CMD upto 150 kVA	1979	8	100	100	231.51	176	0	0	185	17	0	4	0	207	0	207	0	0	0	0	0	0.12	0	
Lights & Fans	0	8	0	0	0.19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0	
Poultry Farms	344	8	475	475	51.29	62	0	0	39	28	0	1	0	68	0	68	0	0	0	0	0	0.03	11	
Poultry Farms Time-of-Day Tariff (6 PM to 10 PM)	0	9	0	0	28.32	0	0	0	24	0	0	0	0	24	0	24	0	0	0	0	0	0.02	3	
Poultry Farms Time-of-Day Tariff (6 AM to 10 AM)	0	9	0	0	25.45	0	0	0	22	0	0	0	0	22	0	22	0	0	0	0	0	0.01	3	
Poultry Farms Time-of-Day Tariff (10 PM to 6 AM)	0	7	0	0	47.99	0	0	0	31	0	0	0	0	31	0	31	0	0	0	0	0	0.03	5	
Colony consumption	0	7	0	0	1.13	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0.00	1	
Seasonal Industries	0	9	475	475	50.89	0	0	0	44	0	0	0	0	44	0	44	0	0	0	0	0	0.03	44	
HT-I HMWSSB	50	8	475	475	39.81	13	0	0	30	6	0	0	0	37	0	37	0	0	0	0	0	0.02	47	
HT - I (B) Ferro-alloys	0	8	475	475	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	44	
HT-II -Others	5326	9	475	475	880.76	1083	0	0	775	494	0	12	0	1281	0	1281	0.84	0.62	0	0	0	0.47	585	
HT-II Others - Time-of-Day Tariff (6 PM to 10 PM)	0	10	0	0	427.70	0	0	0	419	0	0	0	0	419	0	419	0	0	0	0	0	0.23	202	
HT-II Others - Time-of-Day Tariff (6 AM to 10 AM)	0	10	0	0	300.73	0	0	0	285	0	0	0	0	285	0	285	0	0	0	0	0	0.16	169	
HT-II Others - Time-of-Day Tariff (10 PM to 6 AM)	0	8	0	0	527.04	0	0	0	411	0	0	0	0	411	0	411	0	0	0	0	0	0.28	214	
HT-III: Airports, Bus Stations and Railway Stations	11	9	475	475	1.12	2	0	0	1	1	0	0	0	2	0	2	0	0	0	0	0	0.00	0	
HT-III - Aviation Time-of-Day Tariff (6 PM to 10 PM)	0	10	0	0	1.13	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0.00	0	
HT-III - Aviation Time-of-Day Tariff (6 AM to 10 AM)	0	10	0	0	0.59	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0.00	0	
HT-III - Aviation Time-of-Day Tariff (10 PM to 6 AM)	0	10	0	0	1.94	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0.00	0	
HT -IV A Lift Irrigation & Agriculture	170	6	275	275	41.99	51	0	0	26	8	0	0	0	34	0	34	0	0	0	0	0	0.02	17	
HT -IV B - CP Water Supply Schemes	178	6	0	0	155.21	46	0	0	95	6	0	0	0	95	0	95	0	0	0	0	0	0.08	169	
HT-VI - Townships & Colony Supply	241	7	260	260	197.64	120	0	0	144	30	0	1	0	175	0	175	0	0	0	0	0	0.11	121	
HT -VII - Temporary Supply	469	12	500	500	170.56	112	0	0	201	54	0	1	0	256	0	256	0	0	0	0	0	0.09	58	
HT - RESCOs																								
HT IX - Electric Vehicle Charging Stations	20	6	100	100	1.82	8	0	0	1	1	0	0	0	2	0	2	0	0	0	0	0	0.00	0	
HT-IX EV - Time-of-Day Tariff (6 PM to 10 PM)					0.72				0.50	1	0	0	0	1	0	1	0	0	0	0	0	0.00	0	
HT-IX EV - Time-of-Day Tariff (6 AM to 10 AM)					0.76				0.53	1	0	0	0	1	0	1	0	0	0	0	0	0.00	0	
HT-IX EV - Time-of-Day Tariff (10 PM to 6 AM)					3.25				1.63	1	0	0	0	2	0	2	0	0	0	0	0	0.00	0	
<b>HT Category at 33 KV</b>	<b>824</b>				<b>849.08</b>	<b>0.00</b>	<b>2737.25</b>	<b>0.00</b>	<b>6155.95</b>	<b>1199.55</b>	<b>0.00</b>	<b>3.36</b>	<b>0.00</b>	<b>7359</b>	<b>0</b>	<b>7359</b>	<b>64.06</b>	<b>64.95</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.55</b>	<b>7492.41</b>	
HT-I Indr Segregated	560	7	475	475	2549	2087	0	0	1823	952	0	2	0	2776	0	2776	58	60	0	0	0	1.37	1638	
HT-I Indr. Time-of-Day Tariff (6 PM to 10 PM)	0	8	0	0	1093	0	0	0	890	0	0	0	0	890	0	890	0	0	0	0	0	0.59	464	
HT-I Indr. Time-of-Day Tariff (6 AM to 10 AM)	0	8	0	0	989	0	0	0	806	0	0	0	0	806	0	806	0	0	0	0	0	0.53	395	
HT-I Indr. Time-of-Day Tariff (10 PM to 6 AM)	0	6	0	0	1969	0	0	0	1211	0	0	0	0	1211	0	1211	0	0	0	0	0	1.06	858	
Lights & Fans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0	
Poultry Farms	6	7	475	475	6	14	0	0	5	6	0	0	0	11	0	11	0	0	0	0	0	0.00	0	
Poultry Farms Time-of-Day Tariff (6 PM to 10 PM)	0	8	0	0	4	0	0	0	3	0	0	0	0	3	0	3	0	0	0	0	0	0.00	0	
Poultry Farms Time-of-Day Tariff (6 AM to 10 AM)	0	8	0	0	3	0	0	0	3	0	0	0	0	3	0	3	0	0	0	0	0	0.00	0	
Poultry Farms Time-of-Day Tariff (10 PM to 6 AM)	0	6	0	0	8	0	0	0	5	0	0	0	0	5	0	5	0	0	0	0	0	0.00	0	
Colony consumption	0	7	0	0	2	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0.00	0	
Seasonal Industries	0	8	475	475	3	0	0	0	2	0	0	0	0	2	0	2	0	0	0	0	0	0.00	0	
HT-I HMWSSB	4	7	475	475	59	11	0	0	42	5	0	0	0	47	0	47	0	0	0	0	0	0.03	837	
HT - I (B) Ferro-alloys	4	7	475	475	56	10	0	0	40	4	0	0	0	44	0	44	0	0	0	0	0	0.03	187	
HT-II -Others	177	8	475	475	512	435	0	0	409	198	0	1	0	608	0	608	6	5	0	0	0	0.28	27	
HT-II Others - Time-of-Day Tariff (6 PM to 10 PM)	0	9	0	0	224	0	0	0	202	0	0	0	0	202	0	202	0	0	0	0	0	0.12	7	
HT-II Others - Time-of-Day Tariff (6 AM to 10 AM)	0	9	0	0	187	0	0	0	169	0	0	0	0	169	0	169	0	0	0	0	0	0.10	7	
HT-II Others - Time-of-Day Tariff (10 PM to 6 AM)	0	7	0	0	305	0	0	0	214	0	0	0	0	214	0	214	0	0	0	0	0	0.16	8	
HT-III: Airports, Bus Stations and Railway Stations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	19	
HT-III - Aviation Time-of-Day Tariff (6 PM to 10 PM)	0	8	475	475	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	11	
HT-III - Aviation Time-of-Day Tariff (6 AM to 10 AM)	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	7	
HT-III - Aviation Time-of-Day Tariff (10 PM to 6 AM)	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	14	
HT -IV A Lift Irrigation & Agriculture	22	6	275	275	15	46	0	0	10	7	0	0	0	17	0	17	0	0	0	0	0	0.01	2640	
HT -IV B - CP Water Supply Schemes	16	6	0	0	277	49	0	0	169	0	0	0	0	169	0	169	0	0	0	0	0	0.15	172	
HT-VI - Townships & Colony Supply	26	7	260	260	144	64	0	0	105	16	0	0	0	121	0	121	0	0	0	0	0	0.08	0	
HT -VII - Temporary Supply	9	11	500	500	43	22	0	0	47	10	0	0	0	58	0	58	0	0	0	0	0	0.02	0	
HT - RESCOs																								
HT IX - Electric Vehicle Charging Stations																								
HT-IX EV - Time-of-Day Tariff (6 PM to 10 PM)																								
HT-IX EV - Time-of-Day Tariff (6 AM to 10 AM)																								
HT-IX EV - Time-of-Day Tariff (10 PM to 6 AM)																								
<b>HT Category at 132 KV</b>	<b>115</b>				<b>10303.44</b>	<b>0.00</b>	<b>3309.43</b>	<b>0.00</b>	<b>6601.91</b>	<b>916.03</b>	<b>0.00</b>	<b>0.65&lt;/</b>												

# Annexure VII

Form 5

Transmission Contracts

Particulars	FY 2023-24
Total Installed Generation Capacity - Discom's Share (MW)	
Transmission Contracts of Discoms with APTransco (MW/MVA)	
Transmission Contracts of Discoms with PGCIL (MW/MVA)	
Discom's Share in CGS (MW)	
Discom's NCP (MW)	
Discom's CP (MW)	

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## Form 6

Particulars	FY2023-24
<b>Energy Losses %</b>	
Technical LT Losses	1.83%
Technical HT Losses (11 kV)	3.05%
Technical HT Losses (33 kV)	3.60%
<b>Total Technical Losses</b>	
Commercial LT Losses	0.99%
Commercial HT Losses (11 kV)	0.16%
Commercial HT Losses (33 kV)	0.00%
<b>Total Commercial Losses</b>	<b>1.15%</b>
<b>Total Energy Losses</b>	<b>1.15%</b>
<b>Demand Losses %</b>	
Technical LT Losses	7.77%
Technical HT Losses (11 kV)	1.53%
Technical HT Losses (33 kV)	0.80%
<b>Total Technical Losses</b>	<b>10.11%</b>
Commercial LT Losses	0.78%
Commercial HT Losses (11 kV)	0.13%
Commercial HT Losses (33 kV)	-
<b>Total Commercial Losses</b>	<b>0.91%</b>
<b>Total Demand Losses</b>	<b>12.43%</b>
<b>Transmission loss %</b>	
TSTransco Losses	2.50%
PGCIL Losses	3.43%
Total Transmission Losses %	3.74%





Savings Calculation for Reverse Pumping water at low price in Market and Generating at Peak Price period with the same quantum of water

Hydel Station	Period of Operation	Pump MU During the Period	Generation MU During the Period	Factor considered for Operation	Efficiency of Operation with Factor	equivalent Generation MU for the water Pumped	Generation MU (e) matched at Price above (Rs/Kwh)	Pump Cost in Rs.Cr.	Gen cost for Generation MU (e) in Rs.Cr.	Saving in Rs.Cr.	Effective Pump Price in Rs/Kwh	Effective Generation Price in Rs/Kwh
		a	b	c	d=1/c	e=a/c (Approximated)	f	g=a*RTM rate	h=b*RTM rate	i = h-g	j= g*10/a	k=h*10/e

**FY 21-22**

N'Sagar	01-04-21 to 27-07-21	153	177	1.7	0.59	89	3.01	40.68	42.68	2.00	2.67	4.79
N'Sagar	07-01-22 to 31-03-22	207	168	1.7	0.59	122	5.08	70.85	130.83	59.98	3.42	10.74
<b>Total</b>		<b>360</b>	<b>345</b>	<b>1.7</b>	<b>0.59</b>	<b>211</b>		<b>111.52</b>	<b>173.50</b>	<b>61.98</b>	<b>3.10</b>	<b>8.23</b>
Srisailam	30-11-21 to 28-02-22	77	185	1.5	0.67	52	5.99	16.89	44.47	27.58	2.19	8.59

<b>Grand Total</b>		<b>437</b>	<b>530</b>	<b>1.66</b>	<b>0.60</b>	<b>263</b>	-	<b>128</b>	<b>218</b>	<b>90</b>	<b>2.94</b>	<b>8.30</b>
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**Total Saving in FY 21-22 in Rs. Cr.**

**90**

**FY 22-23**

N'Sagar	01-04-22 to 05-08-22	265	201	1.7	0.59	156	7.00	126.85	176.33	49	4.79	11.31
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**Total Saving in FY 22-23 in Rs. Cr.**

**49**

**INSPECTION OF TRANSFORMERS REPAIRING CENTRES ON DATE :19.01.2023**

Sl.No.	Name of the operation circle	Name of the repairing centre	Located at Village /Town	S.C.No.	Contracted load	Connected load (during inspection)	Consumption recorded(billed units)		Billing Category	Remarks
							From 04/21 to 03/22 FY (2021-22)	From 04/22 to 09/22 (First Half yeat 2022-23)		
1	BANJARAHILLS	ASST.ENGINEER,SPM,ERRAGADDA (SECTION : S.K.NAGAR)	S.K.NAGAR	SZ006490	27 KW	11.2 KW	24050	6097	II	Repairing minor DTR's only
2	BANJARAHILLS	ASST. DIVISIONAL ENGINEER/SPM/HYD(SOUTH)/ERRAGADDA (SECTION : S.K.NAGAR)	S.K.NAGAR	S2012971	27 KW	Status-9	433	0	II	Not in use
3	BANJARAHILLS	RAMAKRISHNA TRANSFORMERS (BANJARAHILLS & SECUNDERABAD circles)	HABSIGUDA	0701 54608	49 HP	12.75 HP	12009	2621	III	PRIVATE SHED
4	Hyd Central	-	-	-	-	-	-	-	-	
5	Hyd South	Santosh Electrical	Madannapet	P278090	5KW	12.44	16736	1810	II	Meter changed on May/2021
6	Secunderabad	-	-	-	-	-	-	-	-	
7	Cybercity	TSPA	TSPA	3423 00528	37.3 KW	37.3 KW	9785(KWH), 10102(KVAH)	49725(KWH), 5176(KVAH)	II	
8	Cybercity	CHEVELLA	CHEVELLA	2637 000384	14.92 KW	14.92 KW	9847(KWH), 11166(KVAH)	2869(KWH), 3432(KVAH)	II	
9	Rajendranagar	Shadnagar	Shadnagar	3101 07000	54KW	0.12	287	76	II	
10	Rajendranagar	Rajendranagar	Upparpally	3407 07738	30KW	0.54	6690	2444	II	
11	Rajendranagar	Maheshwaram	Maheshwaram	1214 01572	22.38	8.3	4176	8949	II	
12	Rajendranagar	Amangal	Amangal	2102 02481	55.20KW	13.08	16853	5440	II	
13	Saroornagar	Pruthvi Enterprises	Town	5701 00517	30KW	18.5 KW	4531	2547	II	Cat Changed from 3 to 2 in the month of 03/21
14	Saroornagar	Pruthvi Enterprises	Town	4912 02867	29.84 KW	22.0KW	9469	4773	II	Cat Changed from 3 to 2 in the month of 03/21
15	Vikarabad	ADE/SPM/R R CIRCLE	Vikarabad	1531007203	29.84	29.84	9788	4644	II	
16	Vikarabad	ASSISTANT DIVISIONAL ENGINEER	Pargi	3017002294	29.84	29.84	12043	8638	II	
17	Vikarabad	T R E SHED AT Kodangal	Kodangal	152302096	37.3	37.3	19359	7147	II	
18	Vikarabad	A D E SPM GUN ROCK	Tandur	2236006588	29.84	29.84	13978	11447	II	
19	Habsiguda	M/s KK Rao Electricals (DTRs)	Nachram Uppal	0705 23256	29.84 KW	20 KW	20139	11390	II	As per EBS service is released in 04/2021
20	Habsiguda	M/s BSR Enterprises (CTPT sets)	Nachram Uppal	0705 23257	29.84 KW	8 KW	3098	2200	II	As per EBS service is released in 04/2021

Sl.No.	Name of the operation circle	Name of the repairing centre	Located at Village /Town	S.C.No.	Contracted load	Connected load (during inspection)	Consumption recorded(billed units)		Billing Category	Remarks
							From 04/21 to 03/22 FY (2021-22)	From 04/22 to 09/22 (First Half year 2022-23)		
21	Medchal	M/S S&S ENTERPRISES, Jeedimetla	Jeedimetla	0132 01451	50.36	18	16288	7800	II	
22	Medchal	K K RAO ENGINEERING WORKS P L Medchal-I	Medchal	0212 01210	29.84	19.22	20256	7939	II	
23	Medchal	PRUDHVI ENTERPRISES Medchal-II	Medchal	0212 01386	15	15	10984	5890	II	
24	Mahaboobnagar	Asst Engineer TRE/Jadcherla	Jadcherla Town	3401 10186	46 KW	27 KW	11539	6278	II	
25	Mahaboobnagar	N.Shiva Kumar	Jadcherla Rural	3402 01500	53 KW	25 KW	6974	1059	II	
26	Mahaboobnagar	Bharat Electricals	Jadcherla Rural	3402 01358	22.38 KW	17 KW	12061	5832	II	
27	Mahaboobnagar	M/S Highlight Enter prises	Mahabubnagar Town	01752 21166	55 KW	31 KW	19543	9142	II	
28	Medak	AE/SPM/MEDAK CONTRACTOR: Shankar Reddy [Mobile] 9848066586	Medak	1410109714	29.84	19.5	10915	7740	II	BILLED UNDER CAT III UPTO JAN/22 CASE BOOKED VIDE DPE/MDK/7911/22 FOR R.1,87,299/- (Assessment From 01-Jan-2017 To 13-Jan-2022)
29	Medak	SUSHIL ELECTRICALS Manikya Reddy [Mobile] +919440085327	Papannapet	5562701028	23.87	13.8	16560	8268	II	BILLED UNDER CAT III UPTO FEB/22 CASE BOOKED VIDE DPE/MDK/SD01/16158/22 FOR R.2,16,868/- (Assessment From 14-Feb-2017 To 14-Feb-2022)
30	Medak	ASST.ENGINEER APCPDCL CONTRACTOR: Manikya Reddy [Mobile] +919440085327	Narsapur	1850104274	22.38	22.5	17298	8741	II	BILLED UNDER CAT III UPTO FEB/22 CASE BOOKED VIDE DPE/MDK/SD01/16161/22 FOR R.2,28,477/- (Assessment From 14-Feb-2017 To 14-Feb-2022)
31	Medak	K.K. ENGINEERING WORKS (SPM) Yadagiri [Mobile] 9000650674	Toopran	1211200096	29.84	23.7	7695	4021	II	BILLED UNDER CAT III UPTO DEC/17 CASE BOOKED VIDE DPE/MDK/SD01/9782/17 FOR R.1,56,730/- (Assessment From 01-Aug-2012 To 17-Nov-2017)
32	Medak	INDIAN ENGINEERING INDUSTRY Mutyalu [Mobile] +919440006967	Ramayampet	1311802785	22.38	18.64	16797	9409	II	BILLED UNDER CAT III UPTO NOV/17 CASE BOOKED VIDE DPE/MDK/3537/17 FOR R.2,54,415/- (Assessment From 01-Aug-2012 To 17-Nov-2017)
33	Nalgonda	M/s. SUSHI ELECTRICALS	NALGONDA - TOWN II	201407256	37.30	37.30	9448	4319	II	
34	Nalgonda	M/s.Rama Krishna Industries/Nalgonda	NALGONDA - TOWN II	201426113	37.3	37.3	10874	5225	II	
35	Nalgonda	A.E/ELECL. (SPM),(Beneficiary(ASSISTANT ENGINEER /ELECTICAL (SPM)))	MIRYALAGUDA(RURAL)	3322400128	29.84	29.84	1166	1737	II	
36	Nalgonda	M/s.NAGARJUNA PLASTIC PROPERTY(Beneficiary())	MIRYALAGUDA(RURAL)	3303400209	53.34	53.34	12433	3399	II	
37	Nalgonda	M/s. SUSHI ELECTRICALS	MUNUGODU	701402531	37.3	37.3	6348	3142	II	
38	Nalgonda	M/s. KRISHI POWER ELECTRICALS	NAMPALLY	4307400898	33.57	33.57	12641	6700	II	

Sl.No.	Name of the operation circle	Name of the repairing centre	Located at Village /Town	S.C.No.	Contracted load	Connected load (during inspection)	Consumption recorded(billed units)		Billing Category	Remarks
							From 04/21 to 03/22 FY (2021-22)	From 04/22 to 09/22 (First Half yeat 2022-23)		
39	Nalgonda	M/s. SRI LAXMI GANAPATHI PAPER(Beneficiary(M/S . SAI ELECTRICALS	HALIYA	3801403991	7.46	7.46	1537	1220	II	KWH READING
40	Nalgonda	M/S. BHAVANI ENTERPRISES	HALIYA	3805401619	8.95	8.95	2384	6378	II	Jul 21, 0 reading jan-22 kvah
41	Nalgonda	MS SRI SURYA TYRE RETRADING,(Beneficiary (V. SRINIVASULU ELECTRICAL & ENGINEERING	MIRYALAGUDA TOWN-II	3201402580	33.57	33.57	23264	9360	II	
42	Nalgonda	ADDL.ASST. ENGINEER/SPM/K.M. PALLY	K.M PALLY	4202403327	35.00	35.00	11750	5086	III	
43	Nalgonda	M/s.Bhavani Enterprises, Nakarekal	NAKREKAL	1301407943	15.00	15.00	9820	5086	II	
44	Nagarkurnool	M S THANVI ENTERPRISES(Beneficiary(Venkata swamy, 9848275966))	NagarKurnool	1514 12204	28	21.6	8827	7340	II	BILLED UNDER CAT III UPTO JAN/22 CASE BOOKED VIDE DPE/NGKL/SD01/574/22 FOR R.234059.0 /- (Assessment From 01.05.2017 To 01.02.2022)
45	Nagarkurnool	ASST.DIV-ENGINEER(Beneficiary(M/S Raghavendra Elec Contract, G Sankeerth Reddy, S/o Jayanth Reddy, 9505043883))	Achampet	2101 04288	33.57	12.44	14747	6634	II	BILLED UNDER CAT III UPTO FEB/22 CASE BOOKED VIDE DPE/NGKL/SD01/575/22 FOR R.293898.0 /- (Assessment From 07-Feb-2014 To 08-Feb-2022)
46	Nagarkurnool	S. PULLAIAH M/S ANANTHA SWAMY(Beneficiary(Highlight Electricals, Khaleel, (Ph No: 9440123848)))	Kalwakurthy	2701 01525	73.8	46.04	-	-	III	BILLED UNDER CAT III UPTO FEB/22 and changed to Cat II from Feb 22 to May 22, from May 22,SPM center shifted to Sc No : 2701 01770. CASE BOOKED VIDE DPE/NGKL/1166/22 FOR R.163664.0 /- (Assessment From 01-01-2020 To 01-Feb-2022)
47	Nagarkurnool	ADDL.ASST.ENGINEER APCPDCL(Beneficiary(M/S Raghavendra Elec Contract, G Sankeerth Reddy, S/o Jayanth Reddy, 9505043883)))	Kollapur	5510 03616	37.3	18.56	10371	9486	II	BILLED UNDER CAT III UPTO 01.22 CASE BOOKED VIDE DPE/NGKL/1168/22 FOR R.282541.0 /- (Assessment From 01.01.2014 To 03.02.2022)
48	Nagarkurnool	THE AE MAIN TRAINING(Beneficiary(Highlight Electricals, Khaleel, (Ph No: 9440123848)))	Kalwakurthy	2701 01770	11.19	22.66	0	10909	II	BILLED UNDER CAT III UPTO 08.22 CASE BOOKED VIDE DPE/NGKL/SD01/1006/22 FOR R.50744/- (Assessment From 16.05.2022 To 01.09.2022)
49	Nagarkurnool	THE ASST. DIVIS. ENGINEER	NagarKurnool	1514 05354	33.57	0	0	0	III	Due to Court Case, the Service is not running
50	Sangareddy	M/s S&S Enterprises	Sadashivapet	0701 06899	14.92 KW	7.52	10374	7502	II	
51	Sangareddy	M/s Sai Ram Electrical Works	Zaheerabad	0001 06264	29.84 KW	15.62	19352	9179	II	
52	Sangareddy	M/s Santhosh Electricals	Jogipet	5510103524	23.87 KW	13	11183	5920	II	Private Building
53	Sangareddy	M/s Santhosh Electricals	Narayankhed	4424602762	22.38 KW	15.75	14765	8214	II	
54	Sangareddy	M/s Krishna Sai Electricals	Patancheru	0501 17652	36.55 KW	15.62	15425	7625	II	

Sl.No.	Name of the operation circle	Name of the repairing centre	Located at Village /Town	S.C.No.	Contracted load	Connected load (during inspection)	Consumption recorded(billed units)		Billing Category	Remarks
							From 04/21 to 03/22 FY (2021-22)	From 04/22 to 09/22 (First Half yeat 2022-23)		
55	Siddipet	S&S Enterprises	GAJWEL	0101 05150	41.03	22.38	9800	4980	II	
56	Siddipet	BALAJI ELECTRICALS	THUKKAPUR	8814 00298	19.417	21.6	7244	3518	II	
57	Siddipet	Santosh Electrical	CHITTAPUR	9901 00859	35	22.5	7242	4184	II	
58	Siddipet	LAXMI IELECTRICALS	SIDDIPET	0001 55559	40.22	18.73	7716	402	III	
59	Siddipet	IBNI ELECTRICALS	BEJJANKI	2511 02797	35	18.1	7266	4768	II	
60	Siddipet	AR ELECTRICALS	KOHEDA	6401 02928	29.84	26	3032	2402	II	
61	Siddipet	LAXMI IELECTRICALS (HUSNABAD)	HUSNABAD	6101 05035	29.84	16.58	7476	5203	II	
62	Siddipet	KRANTHI ELECTRICALS	CHERIYAL	30011001653	35.81	16.6	5638	3168	II	
63	Siddipet	QUALITY ELECTRICALS	CHERIYAL	30011001701	36.55	19.6	9633	4272	II	
64	Suryapet	ADE/SPM/SURYAPET	SURYAPET	1801425610	33.57	18KW	18953	8,716	II	
65	Suryapet	SRI RENUKA OIL FILTERS	J.R.GUDEM	2406400352	26.11	18KW	15611	5,945	II	
66	Suryapet	VENKATESHWARA ELCTCL.INDUSTRIES	HUZURNAGAR TOWN	2901400695	26.11	21KW	11530	4744	II	
67	Suryapet	S.P.M. CENTRE	DIRSINACHERLA	3103400876	29.84	18KW	10586	4284	II	
68	Suryapet	M/S ASST DIVISIONAL ENGINEER	KODAD	2401423675	29.84	18KW	6699	4948	II	
69	Suryapet	MS SRINIVASA RICE MILL	MUNAGALA	2701400159	45	18KW	8053	3457	II	
70	Wanaparthy	Wanaparthy	Town	0101-11110	39.99(KW)	29.05(KW)	11348	6120	II	
71	Wanaparthy	Kothakota	Town	0712-03618	40.00(KW)	22.05(KW)	8250	2747	III	
72	Gadwal	Gadwal	Town	620806090	14.17(KW)	14.7(KW)	12900	6350	II	
73	Gadwal	Alampur	Town	673000069	6.00(KW)	6.00(KW)	5823	1458	III	
74	Yadadri	M/s.Hind Electronics, Bhongir	Bhongir	6301405344	29.84	24.5	6316	2349	II	
75	Yadadri	M/s.Vijay Industries, Bibinagar	Bhongir	6301411528	55.2	51.2	5516	2698	II	
76	Yadadri	M/s.Srinivasa Transformer works, Alair	Alair	5604404058	29.4	28	16132	5316	II	
77	Yadadri	M/s.Srinivasa Transformer works, Mothukur	Mothukur	6023402841	29.84	28.5	13640	6467	II	

Sl.No.	Name of the operation circle	Name of the repairing centre	Located at Village /Town	S.C.No.	Contracted load	Connected load (during inspection)	Consumption recorded(billed units)		Billing Category	Remarks
							From 04/21 to 03/22 FY (2021-22)	From 04/22 to 09/22 (First Half yeat 2022-23)		
78	Yadadri	Choutuppal SPM	Choutuppal	1202403945	37.3	35.2	6961	3773	II	
79	Yadadri	Ramannapet SPM	Ramannapet	6119402169	37.3	34.5	6819	3279	II	
80	NARAYANPET	SPMTRANSFARMER REPARING CENTER	KOSGI	0161305781	26.11 KW	25 KW	33391	5208	II	
81	NARAYANPET	AE SPM MBNR NARAYANPET	NARAYANPET	0186915060	8.95 KW	13.15 KW	12198	4590	II	4.2 KW ADDL LOAD
82	NARAYANPET	S P M SHED MBNR	MAKTHAL	0182603222	37.30 KW	16 KW	14547	5348	II	