

# TRANSMISSION TARIFFS FOR THE PERIOD FY2014-15 TO FY2018-19



## ORDER

9<sup>th</sup> May, 2014

**ANDHRA PRADESH**

**ELECTRICITY REGULATORY COMMISSION**

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**ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION  
HYDERABAD**

**Dated:09.05.2014**

**Present**

**Dr. V.Bhaskar, Chairman**

**Sri R.Ashoka Chari, Member**

**Sri P.Rajagopal Reddy, Member**

**O.P. No.62 of 2013**

The applicant is the Transmission Corporation of Andhra Pradesh Limited (APTRANSCO). The Applicant, has filed its application before the Commission on 30.11.2013 for approval of its Aggregate Revenue Requirement (ARR), Filing for Proposed Tariff (FPT) i.e., Transmission charges and Transmission Loss percent for the 3<sup>rd</sup> Control Period (FY2014-15 to FY2018-19) for its Transmission business u/s 26(5) of the Andhra Pradesh Electricity Reform Act, 1998 (Reform Act) and u/s 61 to 64 of the Electricity Act, 2003 read with Regulation No.5 of 2005.

This filing came up for public hearing before several consumers, generators, the representatives of various consumer organizations, political parties and other stakeholders on 21.01.2014 (Tuesday) at Hyderabad and having stood over for consideration till this day, the Commission passed the following:

**O R D E R**  
**CHAPTER - I**  
**INTRODUCTION**

1. The Commission notes that the Andhra Pradesh State Reorganization Act, (No.6 of 2014) (hereinafter called the Act) has been gazetted on 1.3.2014. As per Section 3 of the Act, the State of Telangana will be created on and after the appointed day. The Appointed Day has been notified as 2<sup>nd</sup> June, 2014. Thus two States, Andhra Pradesh and Telangana will come into existence on 2.6.2014.
2. The present determination by the Commission of the Transmission Tariff based on APTRANSCO filings for transmission business have been made for the energy infrastructure environment of the undivided State of Andhra Pradesh.
3. After 2<sup>nd</sup> June, 2014, the energy infrastructure environment of each State will be divided consistent with Sections 53,68,69,71,81,82,85 and 92 of the Act and the Ninth and Twelfth Schedule to the Act. The present determination of Transmission Tariff may have to be reviewed by the Regulatory Commissions of the two States referred to in Clause 3 of the Twelfth Schedule of the Act, in the light of their respective energy infrastructure environment of the two States.
4. The Electricity Regulatory Laws in Andhra Pradesh have not yet been amended to recognize the formation of two States from the existing Andhra Pradesh State. The Commission also notes that it is legally bound to proceed as per its present mandate in Electricity Act, 2003 and the relevant existing regulations of the Commission.
5. If the Commission does not proceed to determine the Transmission Tariff for the period 1.4.2014 onwards, the TRANSCO will not have a legal basis for levying tariff and avoid would be created effecting the economic viability of TRANSCO to recover charges for performing its essential functions to maintain the critical electricity sector.
6. Accordingly, this Commission has decided to issue this Order which though nominally is indicated as applicable for the 3<sup>rd</sup> Control Period (2014-2019) and which consistent with its existing regulations, will be subject to review by the



Successor Regulatory Commissions of the two States whenever deemed necessary by the respective Commissions.

**GENERAL**

7. The Transmission Corporation of Andhra Pradesh Ltd. (APTRANSCO) or Applicant is the holder of the Transmission License (License No.1/2000) issued by Andhra Pradesh Electricity Regulatory Commission (APERC) or Commission in the State of Andhra Pradesh under relevant provisions of the Electricity Act, 2003(Act). Further, as per section 39(1) of the Act, APTRANSCO is also the State Transmission Utility (STU). The Commission, to determine the tariff u/s 62 for transmission of electricity, has notified on 30-11-2005, the APERC (Terms and Conditions for determination of Tariff for Transmission of Electricity) Regulation (Regulation No.5 of 2005), inter alia specifying Multi Year Tariff (MYT) Regulatory Framework.

***Processing of the Application***

8. The ARR filings and statements containing the proposals for determination of the Transmission Charges and Transmission Loss percent for the 3rd control period filed by Applicant was scrutinized and found to be generally in order as required under the APERC (Conduct of Business) Regulation No.2 of 1999. The Commission admitted the application and the same was taken on record by assigning Original Petition (O.P.) No.62 of 2013.

***Notification calling for objections/suggestions***

9. The Applicant, as directed by the Commission, published a public notice in two (2) English and two (2) Telugu (in Telugu) daily newspapers on 04.12.2013 as shown in Annexure B1 & B2 informing the general public that the Applicant had made its filings on Transmission Charges and Transmission Loss percent for the 3<sup>rd</sup> control period (FY2014-15 to FY2018-19) with the APERC and copies of the filings were available at Office of the Executive Director (Planning, RAC & Reforms) at their headquarters and also in the Zonal, Circle and Division offices located at each District, for inspection/ perusal/ purchase by interested person(s). These filings were also made available on the website of the Applicant as well as the Commission. Interested person(s) and stakeholders were requested to file their objections/ suggestion on the filings by 03.01.2014 and also informing the intention of the Commission about conduct of Public Hearing in the matter from 10:30 hrs onwards on 21.01.2014 at Hyderabad.

### ***Response to Public Notice***

10. Following the public notice, Eight (8) persons/generators/organizations have sent their objections/suggestions to the Commission Secretary, APERC on the Tariff proposals of the Applicant by the due date i.e., by 03.01.2014.
11. The Commission directed the Applicant on 03.12.2013 that it should simultaneously arrange responses to the Objectors as and when the Objections were received, without waiting till the due date i.e., 17.01.2014 and also to post the responses on the Applicant's official website.

### ***Venue of Public Hearing***

12. The venue of the public hearing viz., FAPCCI Auditorium, FAPCCI Marg, Red Hills, Lakdi-ka-pul, Hyderabad was informed to the Applicant on 10.01.2014 and was also adequately publicized through press release and also by hosting the matter in the Commission's Official website.

### ***Public Hearing***

13. The Commission organized the Public Hearing at the notified venue on 21.01.2014. During the Public Hearing, the Applicant made a brief presentation on their filings and then, the Commission heard all the objectors desiring to be heard in person. Apart from the registered Objectors, the persons/organizations who had turned up at the venue directly were also heard and their objections/suggestion were also considered. Finally, following the directions of the Commission, the Applicant responded to the issues raised by the objector during the hearing.
14. The complete list of registered objectors who had made written objections within the due date and the names of the stakeholders who attended the Public Hearing on 21.01.2014 and submitted their objections/ suggestions/ comments on filings of APTRANSCO are given in Annexure-B3.

### ***Meeting of the State Advisory Committee***

15. The issues relating to the proposals for Transmission Tariff for the 3<sup>rd</sup> Control Period were discussed in the State Advisory Committee (SAC) meeting held on 16.01.2014 and the suggestions made by the SAC members have been taken into consideration by the Commission while finalizing this Order.

### ***GENERAL ISSUES RAISED DURING PUBLIC HEARING***

#### ***a) Arranging of prompt Reply by Licensee & furnishing ARR in Telugu***

16. Some of the Objectors like **Sri M.Venugopala Rao of Center for Power Studies, Sri M.R.Prasad of AP Ferro Alloy Manufacturers Association and Others** submitted that Licensee is sending delayed replies to their objections sometimes reaching after the completion of the Public Hearings in spite of the clear instructions from APERC to make the replies available to the Objectors in advance.

Some of the Objectors submitted that both the ARR copies filed by the Licensees and the Tariff Order to be issued by the Commission should be made available in Telugu also.

Some Objectors represented that earlier the Commission used to send intimation letters to the objectors informing them of the details of the dates & venues of the Public Hearings.

**Commission's View:** The Licensee henceforth should ensure that timely responses are provided to the objectors well in advance of the date of the Public Hearing. As directed, APTransco has made summary of filings in Telugu also.

Adequate notice of Public Hearing together with dates and venues thereof was given by the Commission both through paper publications as well as on its website. Issue of individual invitation letters is not feasible.

***b) Prompt publication of Annual Accounts & True up.***

17. Sri M.Badrinath of Hyderabad, Sri M.R.Prasad of AP Ferro Alloy Producers Association, Sri Shiva Kumar of A.P.Spining Mills Association, Sri Anil Reddy of Federation of Andhra Pradesh Chamber of Commerce & Industries (FAPCCI) and others submitted that except for FY 2010-11, APTransco has not published its Annual Accounts in its website for public use. In the absence of availability of the same the working results of the Company cannot be understood fully by stake holders and further, in the absence of detailed Annual Accounts for all years, the filing cannot be treated as complete. The objectors requested the Commission to direct the Licensee to publish the Annual Accounts and Annual Administrative reports on its website and extend time by at least one week after such publication for submission of objections.

Sri M.R.Prasad, General Secretary of A.P.Ferro Alloy Producers Association and Others submitted that APTRANSCO has claimed the true-up for the financial years

2008-09 to 2012-13 amounting to Rs.233 Cr. However, neither the audited accounts for such years have been uploaded by the licensee on its website nor the same have been published along with the current petition and under such circumstances, the ARR and True up petition of APTRANSCO is fit to be rejected, the Objectors pointed out. Objectors further submitted that non-submission of audited accounts would be breach of Andhra Pradesh Electricity Regulatory Commission (Terms and conditions for determination of Transmission Tariff) Regulation, 2005 and the very objective of inviting comments and suggestions from the consumers and stakeholders fails miserably in the absence of audited accounts.

**Reply of the Licensee:** AP Transco has been publishing the Annual Accounts every year and has been placing the same on the table of Legislative Assembly and Legislative Council complying with the statutory provisions. The published Annual Statement of Accounts from 2007-08 to 2011-12 are available for public viewing on APTransco website [www.aptransco.gov.in](http://www.aptransco.gov.in) APTransco has been submitting its final accounts to the APERC, Ministry of Statistics & Programme Implementation, Central Statistical Organization, AG, AP, Directorate of Economics and Statistics, GoAP. APTransco is transparent in its accounts and there is no need to hide the accounts from the public view as these accounts are audited by the external auditors & AG office as per the provisions of company laws and are published and placed before the A.P. Legislative. The status details of the Accounts are given in Table-1.1 below.

**TABLE NO.1.1 - The status of publication of annual accounts by APTransco**

Year of Annual Accounts	Date of adoption of AGM	Date of placement before State Legislative Assembly/ Council
1998-99	01.06.2002	29.03.2003
1999-2000	31.03.2003	27.09.2003
2000-01	09.07.2003	28.07.2004
2001-02	29.10.2003	28.07.2004
2002-03	28.04.2004	28.07.2004
2003-04	20.01.2005	03.10.2005
2004-05	09.01.2006	29.08.2006
2005-06	29.09.2006	15.12.2006
2006-07	20.09.2007	20.11.2007
2007-08	19.09.2008	02.12.2008
2008-09	30.09.2009	26.02.2010/02.03.2010
2009-10	29.09.2010	16.12.2010
2010-11	20.09.2011	05.12.2011/04.12.2011
2011-12	31.12.2012	14.06.2013/20.06.2013
2012-13	30.11.2013	The Annual Accounts are under printing.

**Commission's View:** The Commission notes that the Transco's annual accounts from FY2007-08 to FY2012-13 are available on its website. It however notes that there was a delay of 3 months and 2 months respectively in finalizing these accounts for the years FY2011-12 and FY2012-13. It directs, AP Transco to ensure that its annual accounts are finalized by 30<sup>th</sup> September every year. As a part of the good governance Transco should aim to publish every quarter its results promptly. A copy also may be submitted to Commission.

Regarding considering the true-up proposals of APTRANSCO for the period FY2008-09 to FY2012-13, the clauses No. 10.5 to 10.7 of APERC Regulation No. 5 of 2005 states that for the purpose of sharing gains and losses on variations in controllable items of ARR with the users, Control Period as a whole to be considered. Hence the Commission is of the view not to consider True up of the 2<sup>nd</sup> Control Period in view of the provisions in the regulation as stated above. It will be examined after completion of the Control Period and audited accounts are made available for all the years of the Control period. The True-up proposals filed earlier for 1<sup>st</sup> Control Period (FY2006-07 to FY2008-09), will be examined by the Commission in this order.

*c) Crop Compensation for erection of Towers in Paddy fields.*

18. **Sri Cherukuri Venugopala Rao of Federation of Farmers' Associations, Krishna Dist and Others** have submitted that AP Transco is not paying proper compensations to the farmers who lost their crops / fields at the time of erection of Transmission Lines. They also submitted that AP Transco, victimizing small farmers, by acquiring their lands while excluding lands of rich and powerful people.

**Reply of the Licensee:** As per Electricity Act 2003, the compensation for Right of Way (RoW) for erection of Towers in private lands is being decided by the respective Dist Collectors and the same is being paid by APTransco. Further, provisions of Land Acquisition Act will not apply for erection of towers in private lands as the land occupied by the foot of the tower is not acquired.

**Commission's views:** The Commission notes that the provisions of the Land Acquisition Act are not applied for erection of towers in private lands as the land at the base of the tower is not technically acquired. Presently only compensation towards loss of crop during erection time is paid. The Commission is of the view that the entire land under the towers is not fully utilisable by the

farmers since movement for land utility is constrained under the tower. In view of the above, the Licensee, being a company fully owned by Government, is advised to take up the matter with the GoAP ensuring the compensation payable to the farmers preferably within the extent of legal frame work. Other wise, Transco should examine the better practices followed by the other comparative organizations including PGCIL.

***Conclusion***

19. APTransco's filings for Transmission Tariff is broadly in conformity with the Regulation No.5 of 2005, issued for the purpose of fixation of Transmission Tariff. APTransco requested that the filing may be examined and the Transmission Tariff fixed for each year of the control period. The Commission analyzed the filings in detail and determined the costs and capacity for each year of the control period. Based on these workings, the Commission fixed/determined the Transmission Tariff for each year of the control period. The Commission's analysis on these filings, is detailed in the following chapters.

## CHAPTER - II

### TRUE UP OF 1<sup>st</sup> CONTROL PERIOD

#### *Commission Analysis and determination of true up expenses:*

20. As required under para 10 of the Regulation 5 of 2005, the Commission has taken true up of transmission business of 1<sup>st</sup> Control Period based on the audited balance sheets for the entire control period i.e. FY2006-07 to FY2008-09. The Transmission business tariff for the 1st Control Period was fixed for the periods from 1<sup>st</sup> April 2006 to 31<sup>st</sup> March 2009 vide Tariff Order Dated 23<sup>rd</sup> March 2006 issued by the Commission. The Transmission tariffs so determined are based on the Terms and Conditions for tariff specified in Regulation No.5 of 2005 of APERC under Multi-year tariff framework and approach. The pass-through of gains and losses of ARR items shall be depend upon the audited actuals will be applicable differentially with respect to uncontrollable and controllable items as stipulated in the Regulation. For the purpose of sharing gains and losses with the users (namely DISCOMs) only aggregate gains and losses for the Control Period as a whole shall be considered as per clause 10.4 to 10.7 of the said Regulation.

The gains and losses in the case of controllable items of expenditure on account of force majeure factors shall be passed on as an additional charge or rebate in ARR over such period as may be specified in the order of the Commission.

Based on the above assumptions, the true-up of the transmission cost pertaining to first Control period was carried out to be passed through in FY2014-15 of 3rd Control Period MYT.

The Annual Revenue Requirement for the Transmission Business as approved by the Commission for three years covered under the 1st Control period are as follows:

**Table No.2.1 - Expenditure item as per Tariff Order, (Rs. Cr.)**

Sl. No.	Expenditure items	T.O 2006-07	T.O 2007-08	T.O 2008-09
1.	O&M Expenses (Gross)	181.02	201.75	215.87
	- Employee Cost	87.48	110.23	117.94
	- Admn & Genrl Exp.	23.83	23.31	24.94
	- Repairs & Maintenance	69.71	68.21	72.98
2.	O&M Carrying cost	1.41	1.62	1.80
3.	Return on Capital Employed	310.30	321.24	331.78
	Int. on Loan	211.88	219.39	224.02
	Return on Equity	98.42	101.85	107.76
4.	Depreciation	252.23	271.01	294.81
5.	Extra-ordinary Expns.	0	0	0
6.	Spl. Appropriations	-56.95	-56.95	-56.95
7.	Less: Expns. Capitalized	35.20	36.13	37.65
8.	Less: IDC Capitalised	22.06	22.97	16.21
9.	<b>Gross ARR</b>	<b>630.75</b>	<b>679.57</b>	<b>733.45</b>
10.	Less: Non-Tariff Income	15.47	15.47	15.47
11.	<b>Net ARR</b>	<b>615.28</b>	<b>664.10</b>	<b>717.98</b>

As per the section 10.4 of the said Regulation, only the taxes on income is classified as an uncontrollable item of ARR expenditure. All other items are deemed controllable. Though, the employee cost as part of O&M expenditure has been classified as a controllable item, these needs to be considered for true-up as part of the force majeure factors. Since, the wage revision has resulted from the external environment and no projection was made by the Licensee while submitting the ARR filing. The projection of employee cost portion of O&M cost were made based on actual of FY2005-06 cost only and not for wage revision.

Under true up mechanism, the variation in charges were determined by taking difference between the item wise audited annual accounts figures and comparing the figures projected in the tariff order. If any excess cost had been incurred over the approved cost, it has to be recovered from users. If the cost is less than that projected in Tariff order, the benefit has to be passed on to the users in subsequent control periods. The details of actual cost incurred for each year of the 1st Control period extracted from the annual accounts is tabulated below.



**TABLE NO.2.2 - Expenditure and Revenue as per Actuals**

Sl. No.	Expenditure items	Actuals 2006-07	Actuals 2007-08	Actuals 2008-09
1	O&M Expenses (gross)	236.05	237.57	259.30
	- Employee Cost	114.47	129.78	154.91
	- Admn & Genrl Exp.	21.27	21.50	23.61
	- Repairs & Maintenance	100.31	86.30	80.78
2	O&M Carrying cost	-	-	-
3	ROCE	163.12	165.83	182.46
	Interest on Loan (Gross)	163.12	165.83	182.46
	Return on Equity	-	-	-
4	Depreciation	242.43	259.81	291.13
5	Extra-ordinary/ Other Expns.	6.15	-0.0017	2.76
6	Prov. For Income Tax	30.19	34.46	51.23
7	Prior Period expns	8.64	1.72	(2.70)
8	Spl. Appropriations	-	-	-
9	Less: Expns. Capitalized	41.01	40.27	44.93
10	Less: IDC Capitalised	28.71	25.39	26.97
	<b>Gross ARR</b>	<b>616.85</b>	<b>633.72</b>	<b>712.26</b>
11	Less: Non-Tariff Income	52.26	25.03	60.86
12	<b>Net ARR</b>	<b>564.59</b>	<b>608.69</b>	<b>651.40</b>
13	<b>Surplus / Deficit</b>	<b>28.21</b>	<b>36.32</b>	<b>59.97</b>
14	Revenue actually realized	<b>592.80</b>	<b>645.01</b>	<b>711.37</b>

The element wise costs derived from the balance sheets were normalized as per Regulations based upon the following principles:

- a) Employee cost was allowed as per actuals since they were essential, drawn by the pay revision rather than by employee numbers and was external to the operating environment.
- b) In respect of all other controllable items, expenditure above the amount indicated in the Tariff order was disallowed. Where the expenditure was lower, the lower figure was adopted.
- c) Income tax paid being an uncontrollable item, was allowed as a pass through. Based on the above parameters, the expenditure payment was normalized as below:

**Table No. 2.3 - The Expenditure and Revenue adopted for True-up as per Regulation**

Sl. No.	Expenditure items	Regul 2006-07	Regul 2007-08	Regul 2008-09
1	O&M Expenses (gross)	205.45	219.48	252.84
	- Employee Cost	114.47	129.78	154.91
	- Admn & Genrl Exp.	21.27	21.50	24.94
	- Repairs & Maintenance	69.71	68.21	72.99
2	O&M Carrying cost	-	-	-
3	ROCE	261.54	267.68	290.22
	Interest on Loan (Gross)	163.12	165.83	182.46
	Return on Equity	98.42	101.85	107.76
4	Depreciation	242.43	259.81	291.13
5	Extra-ordinary/ Other Exps.	-	-	-
6	Prov. For Income Tax	30.19	34.46	51.23
7	Prior Period expns	-	-	(2.70)
8	Spl. Appropriations	(56.95)	(56.95)	(56.95)
9	Less: Exps. Capitalized	41.01	40.27	44.93
10	Less: IDC Capitalised	28.71	25.39	26.97
	<b>Gross ARR</b>	<b>612.93</b>	<b>658.82</b>	<b>753.8614</b>
11	Less: Non-Tariff Income	52.26	25.03	60.86
12	<b>Net ARR</b>	<b>560.67</b>	<b>633.78</b>	<b>693.00</b>
13	Revenue actually realized	<b>592.80</b>	<b>645.01</b>	<b>711.37</b>
14	Profit made over and above ROCE	<b>32.13</b>	<b>11.23</b>	<b>18.37</b>

In the above table, 14th row indicates amount of yearly excess (surplus) accrued to the APTRANSCO Business over and above the Tariff Order approved figure. The year wise amount in this row will be summed up and proposed to claw back. The amount as arrived at as per provisions of the Regulations is amounting to Rs.61.73 Cr. is to be recovered in the year 2014-15 of the 3rd Control period ARR in order to pass on the amount to all distribution companies as per their share of entitlement through the annual revenue requirement of FY2014-15.

The total amount to be claw back (for 1<sup>st</sup> Control Period true-up) for an amount of Rs.61.73 Cr in FY2014-15.

## CHAPTER-III

### GENERATION CAPACITIES

21. APTRANSCO projected Transmission Contracted Capacity (in MW) in its filing for 3<sup>rd</sup> Control period, arrived based on the DISCOMs Contracted Capacities with the Transmission Licensee. The DISCOMs projected their non-coincident demands as their contract capacities. The demand from Open Access Consumers has been added to the total contract demands of the DISCOMS, who are likely to use the transmission system to transport the electricity to their chosen destinations. The details of the contracted capacity (Non-coincident demand of DISCOMS and contract demand of OA Consumer) in terms of Mega Watts filed by APTRANSCO are given below:

**Table No.3.1 - Filings - Total Capacities, FY2014-15 to 2018-19**

Financial Year	Distribution Companies	Third Parties, Open Access	Total Capacity in the State
1	2	3	4(2+3)
2014-15	16955	420	17375
2015-16	18923	470	19393
2016-17	21124	526	21650
2017-18	23586	586	24172
2018-19	26336	676	27012

#### ***Objections/Suggestions regarding Realization of Generating Capacities***

22. Sri M Venugopala Rao and others submitted the following: For the 2<sup>nd</sup> Control Period of 2009-10 to 2013-14, against the generation capacities projected by AP Transco, ranging from 13973 MW for 2009-10 to 20222 MW for 2013-14, Commission had determined generation capacities ranging from 13744 MW for 2009-10 to 21222 MW for 2013-14 and accordingly determined the SLDC/Transmission charges for the 2<sup>nd</sup> Control Period. APTRANSCO, in its current filings, submitted the revised generation capacity for 2013-14 as 16121 MW. It confirms that by the end of the second control period, the generation capacities projected by APTRANSCO and determined by the Commission are higher by 4101 MW and 5101 MW respectively.

While assessing the need for transmission capacity to evacuate the projected availability of power for the next financial year, under-utilization of existing capacities, both in generation and transmission, need to be taken into

consideration. Addition of new transmission capacities on the basis of projected additions of installed generation capacities will lead to creation of idle transmission capacity, if installed capacities are not added as projected. If adequate transmission capacity is not added in time for evacuation of power from the new generation units, APTRANSCO will be at fault. Therefore, a careful and realistic examination of the prudent balance between generation capacities and requirement of transmission capacities is required.

Sri T Harish Rao MLA, Dr M Thimma Reddy of People's Monitoring Group on Electricity Regulation & Sri Gade Diwakar of All India Kisan Mazdoor Sangh and others submitted that for the 2nd control period (FY 2009-10 to FY 2013-14) the Commission allowed the following generation capacity to be handled by the TRANSCO:

Year	Generation Capacity (MW)
2009-10	13,744
2010-11	15,542
2011-12	15,963
2012-13	17,877
2013-14	21,222

Based on the above capacity addition, the Commission allowed the given transmission tariff. But generation capacity was not added as planned. The following power plants - KTPP II (546 MW), Krishnapatnam/ Damodaram Sanjivayya TTP (1,456 MW) and Dr. NTTP (121 MW) did not start power generation as planned. Even then, there was no decline in revenue from tariff earned by TRANSCO. This may imply that the transmission tariff decided by the Commission was on the higher side than actually needed to compensate the Licensee for the capital expenditure incurred. In the tariff filings for the third control period TRANSCO should have mentioned the generation capacity handled during the second control period. According to the tariff filings for the third control period, the generation capacity handled will cross 21,000 MW only during the third year i.e., 2016-17.

**Reply of the Licensee:** For 2<sup>nd</sup> Control Period, DISCOMs projected the contracted capacities based on the anticipated installed generation capacities. For the 3<sup>rd</sup> Control period, DISCOMs have given their Non coincident demand as

their contracted capacity and APTRANSCO has adopted the same as per the Regulation no 1 of 2005 given by Hon'ble Commission.

The transmission charges have to be levied on the contracted capacities but not on the actual generation capacity. Therefore there was no decline in the transmission revenue in spite on non-materialization of some of the anticipated power plants. Though some of the plants were not materialized in second control period, some other NCE plants have come up during the above period which was not included in tariff order of 2009-14. The reason for the fact that "in the third control period the generation capacity will cross 21000 MW only during the third year 2016-17" is due to the change in the methodology taken for arriving at the contracted capacity. APTRANSCO has to recover their ARR permitted by Hon'ble Commission irrespective of capacities as per the Tariff Order.

All major transmission schemes are being submitted to the APERC for approval duly furnishing the project starting & completion dates. After approval of the APERC only, the licensee is executing the major schemes.

**Commission's View:** The objective of this exercise is to recover the approved costs of the Transmission utility in the next five year period. These costs are determined on a per Mega Watt basis by dividing the costs by the total contracted capacity as specified in the Regulation No.5 of 2005. A lowered Contracted Capacity implies a higher unit tariff to recover the same approved transmission costs and therefore it can not be said that the Commission decides a higher tariff in any case.

There is a true up provision of the whole control period available in the Regulation No.5 of 2005 of APERC for both controllable and uncontrollable items. Under this process, any profit earned on any account will be adjusted in the subsequent tariff orders and consequently the tariff will be reduced to that extent.

The expansion of transmission network will be carried out considering the i) new generating capacities likely to be added and ii) additional load growth forecasted after conducting load flow analysis. Even if new generation capacities are not added as approved, the network created will be used for meeting the load growth.

The Commission, while determining the total contracted capacity for determination of tariff will follow the provisions in the regulation of 5 of 2005 of APERC.

***Objections / Suggestions regarding Considering Generation Capacity - Consent to PPAs***

23. Sri M Venugopala Rao of Center for Power Studies and others submitted that BPL's Ramagundam Project has not taken off even now, despite the questionable decisions taken by the State Government and the Commission in the past to favour the project. Commission has taken appropriate stand on the request of the management of BPL project seeking extension of effectiveness date of the PPA from September 2013 to September 2014 by asserting that BPL's request "can only be considered by the Commission after the same is agreed to by APDISCOMs, being signatories to the subject PPA". Generation capacities likely to be added for providing Network facility during a particular control period need to be taken into consideration only after the DISCOMs enter into PPAs with the projects concerned and the Commission gives its consent to the same after holding public hearings.

**Reply of the Licensee:** Evacuation scheme for BPL power project proposed in ARR for 2<sup>nd</sup> Control Period was not formulated and works could not be taken up, as Power Purchase Agreement (PPA) was not finalized between APDISCOMs and BPL.

**Commission's View:** While regulating the fresh investments in transmission network, the Commission is considering capacities of only those new Generators who have signed PPAs or have an MoU with Transco duly backed up by assurances from the State Government.

***Objections/Suggestions regarding Penalty on Power Generators***

24. Sri Gade Diwakar of All India kisan Mazdoor Sangh and others suggested levying penal charges on the Power Generators who fail to complete the construction of the projects in time for idling of the transmission network provided. They also suggested that the DISCOMs should also participate in the Public Hearings to make their objections on the filings of the Transmission Licensee.

**Reply of the licensee:** PPAs have the penalty clauses in case the Power generator fails to supply power. Similarly there are penal provisions in case the DISCOMs fail to take power from the Generators. If the Power Generators fail to supply power under force majeure conditions, no penalty can be levied. DISCOMS are also welcome to file their objections on the filings made by the Transmission Licensee.

**Commission's View:** The Commission considers the reply given by the Licensee, reasonable, provided that the clauses are invoked wherever appropriate.

***Objections/Suggestions regarding Estimated Peak Demand***

25. **Sri M Venugopala Rao and others** submitted the following: APTRANSCO estimated the net peak demand of 17292 MW by the end of the second control period, i.e., 2013-14. It is now stated that the highest system peak demand of 11972 MW was recorded on 19.3.2012. This shows the wide hiatus between the estimates of APTRANSCO and concrete reality in experience. Can the originally projected net peak demand of 17292 MW be realized by the end of 2013-14?

**Reply of the licensee:** The energy and demand forecast prepared by CEA (Central electricity Authority) in 17th EPS in 2006 for AP from 2009 to FY2013-14 is given below.

FY	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	CAGR 2009-14
Energy (MU)	67967	74288	81404	89034	97184	105665	9.23%
Demand MW	11161	12227	13429	14721	16069	17471	9.38%

APTRANSCO has collected DISCOM wise energy forecast and aggregated them to arrive at the state level energy forecast. After applying a load factor of 75% the peak demand estimated for 2013-14 was 17292 which was matching with the 17th EPS figure of CEA. Due to the sudden drop in the gas production in KG basin and reduced domestic coal production, AP Power system is facing a severe power shortage of the order of 3000 MW during annual peak time. In addition, several lift irrigation projects of the order of 2000 MW, which were expected to start commercial operation by FY2013-14, were also not yet started, due to severe power shortage in the state. Since the gas prices are proposed to double from April 2014, the gas production in KG basin may be stimulated and if supply to Lift Irrigation projects is given the peak demand of 17292 MW may be achieved.

**Commission's View:** The Commission considers the reply given by the Licensee, reasonable as peak demand could not be achieved mainly due to factors exogenous to APTransco.

***Determination of Generation Capacity by Commission***

26. The DISCOMs/TRANSCO have proposed that their non-coincident demand be used as the basis for determining contracted capacity. They further proposed that this be aggregated with demand from Open Access Consumers, and the sum be deemed to be their total contracted capacity to be applied as per Section 20.1 of the Regulation. The proposal of DISCOMS/TRANSCO to adopt the non-coincident demand as the contracted capacity cannot be agreed to, as this interpretation is not supported by the Commission's Regulations.

The Commission notes during their earlier two control periods (2006-07 to 2008-09 and 2009-10 to 2013-14), the generation capacity has been taken to represent the total contracted capacity. The Commission notes further that a directive was issued in Commission's MYT order dated 26.3.2006 on the need for distribution licensees to promptly enter into agreements with APTRANSCO in terms of clause 20.2 of the Regulation which would reveal total contracted capacity. Subsequently, a long term transmission agreement was signed by TRANSCO with DISCOMs in October, 2007 which indicated contracted capacity. However, this agreement has not been updated and new capacities which came into existence subsequently have not been formally contracted for. In the absence of updated figure for contracted capacity, the Commission has no option but to follow the procedure adopted in the previous two control periods and to adopt installed capacity as the total contracted capacity for the following reasons.

- (i) This interpretation of total contracted capacity has been adopted by the Commission over the last two control periods 2006-07 to 2008-09 and 2009-10 to 2013-14. Historical continuity will be maintained.
- (ii) The proposal of DISCOMs/TRANSCO to adopt the aggregate non-coincident demand across DISCOMS as the contracted capacity will require amendment to the Commission's regulation.
- (iii) The aggregate non-coincident peak demand will vary every year over a control period and therefore is not susceptible to accurate estimation as



cumulative errors may be dominant while undertaking the projection exercise.

The installed capacity is further regulated in view of the need to promote Non Conventional Energy as per G.O.M.S.No.39, Dated:26.09.2012 announced a solar policy in GOAP which mandated amongst other no transmission charges for Solar Energy producers. The Commission is required in section 86(1)(e) of Electricity Act to promote NCE. Accordingly the Commission has decided to exempt Solar Wind and Mini Hydel Generation from wheeling charges. The planned generation from this source is deducted from the proposed generation in the 3<sup>rd</sup> Control Period.

**Table No.3.2 - Year wise total Contracted Capacities (in MW) determined by the Commission**

<b>Financial Year</b>	<b>Distribution Companies</b>	<b>Open Access/ Third Parties</b>	<b>Total Capacity in the State</b>
1	2	3	4(2+3)
2014-15	21089	420	21509
2015-16	23461	470	23931
2016-17	24881	526	25407
2017-18	26003	586	26589
2018-19	27110	676	27786

Column 4 provides the total Contracted Capacity to be adopted for the purpose of regulating.

## CHAPTER-IV INVESTMENTS

### *Investment Plan*

27. APTRANSCO filed its investment plan for the third Control Period based on the resource plan incorporated in the ARR filings. As per the investment plan, APTRANSCO intends to invest an amount of Rs.13960 Cr during the Control Period. The details of investments filed are given in Table below:

**Table No.4.1 - Investment Plan filed by Licensee, (Rs. Cr)**

Financial Year	Evacuation and System Improvement		Renovation and Modernization	LI Schemes	Telecom Infra. Development	Total
	400 KV	220 and 132 KV				
1	2	3	4	6	7	8
2014-15	2234.33	1576.02	147.60	545.00	5.75	4508.74
2015-16	3111.72	1013.67	196.91	382.00	0.28	4704.57
2016-17	1477.97	446.37	196.66	309.00	0.00	2430.00
2017-18	468.89	452.86	197.02	127.00	0.00	1245.77
2018-19	251.50	472.86	246.39	100.00	0.00	1070.75
<b>Total</b>	<b>7544.41</b>	<b>3961.78</b>	<b>984.58</b>	<b>1463.00</b>	<b>6.03</b>	<b>13959.83</b>

28. APTRANSCO has projected their requirement of Voltage wise additional number of Substations for the third control period in their resource plan as following:

**Table No. 4.2 - Year-wise additions of substations proposed in Nos.**

Voltage Level	2014-15	2015-16	2016-17	2017-18	2018-19	Additional Substations
400 kV	3	4	3	4	1	15
220 kV	6	12	12	9	6	45
132 kV	18	20	14	17	18	87
<b>Total</b>	<b>27</b>	<b>36</b>	<b>29</b>	<b>30</b>	<b>25</b>	<b>147</b>

Further, APTRANSCO projected to add up about 13,700 Ckt KM of EHT Transmission lines at different voltages.

**Objections/Suggestions regarding Approval of Resource Plan by APERC**

29. **Sri MR Prasad General Secretary M/s Ferro Alloy Producers Association, Smt. Sujatha of FAPCCI and others** submitted that Resource Plan submitted by APTRANSCO as per the Regulation 5 of 2005 of APERC, wherein APTRANSCO had submitted the detailed projection of capital expenditure, loss projections, etc, is in pending for approval by the Commission; considering the same, the capital investment is fit to be rejected if the resource plan is not approved by the Commission.

**Reply of the Licensee:** Licensee had submitted the Resource Plan as per the guidelines issued by APERC. In the absence of the approval of the resource plan by the Commission, the licensee is bound to consider the Resource Plan as approved. The Licensee can therefore use the Capital Investment details of the Resource Plan while arriving at the Transmission ARR and Transmission charges. However, approval of the Resource Plan and determination of the transmission charges are in the purview of APERC

**Commission's View:** The APTRANSCO had originally filed its Resource plan for the third Control Period in the month of July 2013. Subsequently it had filed a revised investment plan along with its ARR filing (MYT filing) for the third Control Period. APTRANSCO in its letter of 02-01-2014 had confirmed that the resource plan filed in ARR may be taken into consideration in place of its earlier filings. After thorough scrutiny of Resource plan filed by Licensee and examining the extent of physical & financial progress achieved against approved quantities for 2<sup>nd</sup> Control Period (FY2009-10 to FY2013-14) Multi Year Tariff (MYT), the Commission approved the Resource plan for the third control period for an amount of Rs.9141 Cr against the filed amount of Rs.13,960 Cr as base capex.

***Objections/Suggestions regarding Capital Cost incurred in 2<sup>nd</sup> Control Period***

30. **Sri MR Prasad General Secretary M/s Ferro Alloy Producers Association and others** submitted that the Commission should conduct a prudence check on the capital investments undertaken by the APTRANSCO in the second control period and conduct a capital side truing up. Objectors stated that the ratio laid down

by Hon'ble APTEL in Appeal No. 84 of 2006, wherein it held that "The regulator is not going to approve the expenditure or approve the financial charges just for asking and the regulator has to satisfy itself by a prudent check with respect to capital investment and in case they contribute for the quality or development or providing better service."

**Dr M Thimma Reddy, Sri T Harish Rao & Sri G Diwakar and others** have submitted that while the Commission allowed Rs. 6,274 Cr towards additions to fixed assets during the 2nd control period, APTRANSCO claimed to have added only Rs.5,619 Cr. During the financial year 2013-14, TRANSCO claims to add fixed assets of Rs.2,459 Cr against Rs. 1,279 Cr mentioned by the Commission. While during the first four years it was not able to add the amounts allowed by the Commission it has to be examined whether it will be able to double that during the last year of the control period.

**Reply of the Licensee:** All major schemes are being submitted to APERC for approval duly furnishing the scheme cost, project starting and completion dates with complete cost benefit analysis. For variation in project cost beyond 10%, prior approval of the Hon'ble Commission is being obtained duly submitting the reasons for variation in cost. After completion of the project, Physical Completion and Financial Completion Certificates are being submitted to the Commission.

Currently, many transmission projects including the GIS Sub stations and XLPE Cables works are in progress and transmission licensee is expecting to capitalize a number of these ongoing projects by the end of March/April/ 2014.

**Commission's View:** Commission has determined not to consider the true-up proposals filed by Licensee for the Financial Years 2009-10 to 2012-13 at this time, as 2<sup>nd</sup> Control Period (FY 2009-10 to FY 2013-14) continues to be in operation and clause 10 in Regulation No.5 of 2005 of APERC permits implementation of true-up only for the control period as whole. Hence the prudent check of investments made in this period does not arise at this stage.

This stance will also apply to performance during the year on which questions have been raised. However, the past performance of APTransco in implementation of Capital works has been taken into account by the Commission while approving the Investment Plan.

***Objections/Suggestions regarding proposed Capital Investment for 3<sup>rd</sup> Control Period***

31. **Sri MR Prasad General Secretary M/s Ferro Alloy Producers Association and others** submitted the following objections with regard to Capital Investment proposals for the 3<sup>rd</sup> Control Period-
- a. The capital expenditure claimed by the APTRANSCO is not in accordance with the Andhra Pradesh Electricity Regulatory Commission (Terms and conditions for determination of Transmission Tariff) Regulation, 2005 which provides (Regulation 14) that the Commission would adopt the capital investment plan approved as part of the Resource Plan. It is understood that the Resource Plan has still not been approved by the Hon'ble Commission. Further, the Regulation 14.2 requires the Transmission Licensee to seek approval for individual schemes in the Capital Investment Plan at least 90 days before undertaking the investment in accordance with the guidelines on investment approval. The compliance of the same has not been done by the APTRANSCO for any of the preceding years.
  - b. There seems to be front loading of the capital expenditure in the initial years of the third control period. According to the projections made by APTRANSCO, the total capital investment in the first 2 years of the control period is around 65% of the total capital investment proposed in the entire control period. Such high projections are not relatable to the past years. The audited accounts reveal that the total capital investment in FY2010-11 was to the tune of Rs.1,092.73 Cr only. Further, as per the submissions of APTRANSCO, the total capital investment in the base year i.e., FY2013-14 is proposed to be Rs.2,175.96 Cr which increases to Rs.4,990.38 Cr in 2014-15 and to Rs.5,394.62 Cr in 2015-16. Commission should conduct a strict prudence check and approve capital investment which is relatable

- to the past, achievable and linked with the load growth requirements. Commission should also check on the status of financial tie-up of each capital investment scheme proposed by the APTRANSCO and the sanction letters and financial tie-up letters should be published by the APTRANSCO.
- c. In respect of the years being trued up, the APTRANSCO has not provided any details for the capital investment and capitalizations in the years 2008-09 to 2012-13. Hence, truing up may not be considered without clear submissions in this regard based on audited accounts.
  - d. APTRANSCO has projected abnormally high conversion rate of capital work in progress to gross fixed asset in the control period ranging from 39% to 73%.

**Reply of the Licensee:** APERC has approved the Capital Investment Plan submitted by APTRANSCO, vide letter, dated 08.01.2014 for 3<sup>rd</sup> Control Period subject to issues which may arise during the forthcoming public consultation process. All major schemes are being submitted to the Hon'ble APERC for approval as per the Commission's guidelines. Gestation period of transmission projects would be different for different voltage levels and depends on many other factors such as land acquisition, forest clearance etc. This would vary from project to project. Hence, it would be difficult to relate based on historical trend for percentage of capitalization. Capex proposed has accounted for load growth, system strengthening to the existing network and capital cost escalation due to inflation. The projected capital expenditure for the years 2014-15 and 2015-16 is high compared to remaining years of Control Period, as major power evacuation schemes are envisaged in these two financial years. Details of capital investment and capitalizations for the years 2008-09 to 2012-13 is enclosed as Annexure-A to the reply served to the Objector.

**Commission View :-** (a) Regarding filing of Resource Plan and approval as per Regulation No.5 of 2005 of APERC, the Commission after scrutiny has approved the Resource Plan / Investment Plan for 3<sup>rd</sup> Control Period.

Further, the APTRANSCO is taking approval of the Commission for all major schemes prior to taking up the work.

(b) The Commission has examined the investment plan and the associated capacity requirement filed by APTRANSCO. After careful consideration of various factors detailed in Para 35 below, the Commission regulated the base investment amount to Rs.9141 Cr. against the filed amount of Rs.13,960 Cr. for the third control period as base CAPEX. Though the proposed capital investment plan by APTRANSCO is ambitious when compared to its historical performance, it necessarily needs to accelerate its pace more during the third control period to build up more network elements given the system requirements particularly in terms of power evacuation.

(c) The True up of the Second control period will be taken up after completion of audited accounts for the FY2013-14 as per the mandate of the relevant Regulation. Regarding true up of FY2008-09, the Commission has conducted a prudential check on the true up filings of first control period (FY2006-07 to FY2008-09), and consequent to this exercise, an amount of Rs.61.73 Cr. surplus has been determined. This amount is being deducted from the 3<sup>rd</sup> control period ARR amount in the FY2014-15 in this order.

d) The capitalization of capital works in progress necessarily depends on the period and pace of implementation of the project.

***Objections/Suggestions regarding Addition of 400 KV Substations***

32. **Dr M Thimma Reddy, Sri T Harish Rao, Sri K Raghu & Sri G Diwakar and others** have submitted the following: APTRANSCO proposes huge capital expenditure to erect a large number of 400 kV sub stations. It has to be examined whether these many sub stations are needed. Some of these substations are meant to evacuate power from new power plants. Until now except in the case of Thermal Power Tech no PPA was entered with other power plants. It has to be seen that these sub stations shall be allowed only after approval of PPA by the Commission following transparent procedure including public hearing. Some of the proposed sub stations are meant to evacuate power from merchant power plants like East Coast Energy Pvt Ltd. The consumers in the state shall not be burdened with this capital expenditure.

**Reply of the Licensee:** The increase in Generating Stations driven by the load growth, require the erection of substations and connected transmission lines, which in turn will require enhancement of the transmission network. Accordingly, during this control period there are number of transmission works proposed in order to meet the transmission requirement based on the load growth for providing reliable supply. Substations and lines proposed in the ARR MYT filing are meant for computation of ARR of APTRANSCO. However, a separate scheme wise approval will be taken for Substations and lines meant for new power plants from APERC. East cost energy has been qualified in Case-1 bidding. As per guidelines of Case-1 bidding, STU (APTRANSCO) is responsible for intrastate transmission system development and evacuation.

**Commission's Views:** Commission has given approval for construction of 11Nos 400kV Sub Stations and connected 400kV lines out of 15 Nos. proposed, under ARR filings filed by AP Transco in the third control period resource plan, after examining the following points: i) examining the load flow study analysis submitted by AP Transco, ii) taking in to account future load growth submitted by Discoms and iii) taking in to consideration the need for providing evacuation of power to new up coming Wind & solar energy source generators, Singareni power plant at Jaipur and the Hinduja power plant at Visakhapatnam.

Further, as pointed out by the Licensee evacuation arrangements for power produced by generators qualified in Case-1 bidding, needs to be put in place.

***Objections/Suggestions regarding Network proposed for Wind Power Evacuation***

33. **Dr M Thimma Reddy, Sri T Harish Rao, Sri K Raghu & Sri G Diwakar and others** have submitted that a part of proposed transmission infrastructure is meant to evacuate wind power. According to the wind energy policy of the state government evacuation of wind power is the responsibility of the developers. Similarly, while calculating wind energy tariff power evacuation costs are included under the plants' capital cost. Given this, it is not proper to take in to account the proposed capital expenditure to evacuate wind power.



**Reply of the Licensee:** As per C-WET report, the estimated Wind Power Potential in the State of AP concentrated mostly in the region of Anantapur, Kurnool and Kadapa Districts is around 14497 MW. So far, 626.49 MW of Wind Projects were commissioned and connected to the existing grid network. In order to harness the potential, MNRE, Govt of India, during the meeting held on 03.06.2011, announced 40% of the project cost as grant to the STU for comprehensive master plan for evacuation of wind and or Solar Power in different states i.e. Tamil Nadu, Andhra Pradesh, Karnataka, Kerala, Gujarat, Rajasthan etc. Further, as per the APERC approved evacuation guidelines in O.P. No. 40 of 2010 dated 30.03.2010, the expenditure of inter connection facilities up to APTRANSCO/ DISCOMS grid substations is to be borne by the developer only. APERC, vide order dated 15.11.2012, determined tariff for future wind power projects, wherein the capital cost considered is including cost of the evacuation up to the Grid substation. System strengthening work is the obligation of the Transmission utility. Hence, comprehensive wind evacuation scheme and corresponding capital investment has been included by APTRANSCO in ARR MYT filing from grid substation (220 KV SS) to 400 KV substations excluding the evacuation scheme of the developer.

**Commission's Views:** Commission, in its order dated 15.11.2012, while determining tariff for future wind power projects, has included the cost of the evacuation up to the Grid substation only, in the capital cost. The system strengthening has to be carried out by AP Transco duly considering load growth and based on system load flow analysis. Hence the reply of AP Transco is found to be reasonable.

***Objections/Suggestions regarding Performance of APTRANSCO-CAG report***

34. **Dr M Thimma Reddy, Sri T Harish Rao & Sri G Diwakar and others** submitted that CAG in its performance report of TRANSCO for the year 2010 commented that the Company constructed sub stations and lines without assessing the load requirement, and that the company's capacity of sub stations at different voltage levels exceeded the norms fixed. The experience during the second control period shows that TRANSCO was not able to achieve the fixed

assets addition as allowed by the Commission. Both these aspects shall be kept in mind while examining its filings for the third control period.

**Reply of the Licensee:** Requirement and expenditure of transmission schemes are arrived at by APTRANSCO based on the load flow studies conducted using Cyme software for meeting the load forecast and capacity addition estimated by DISCOMs by following the planning norms (n-1 contingency criteria etc.) prescribed by CEA and APERC. Any reduction in expenditure on transmission schemes will mean a deviation from planning norms of CEA and an overloading of lines and substations.

**Commission's Views:** The Commission endorses the stance of AP Transco in this matter. There is a dire need to make critical Capital Investment in this deficit sector. All proposals for taking up major investments are being submitted to the Commission for prior scrutiny and approval.

***Objections/Suggestions regarding Procurement procedures in APTRANSCO***

35. Some of the objectors, during the Public Hearings expressed their concerns over the procedures being followed by APTRANSCO for awarding of contracts for erection of Transmission Lines & Substations.

**Reply of the Licensee:** As per the purchase manual of APTRANSCO, all the procurements exceeding Rs.50 Lakhs are done through open tender only and the tenders are called on e-procurement platform.

**Commission's Views:** it is necessary that procurement procedures are not only transparent but are seen to be transparent as well. The Licensee is directed to examine whether further predictability and transparency can be brought into its procurement procedures by examining the procedure adopted by Ministry of Power, PSUS like Power Grid.

***Determination of Investment plan:***

The Commission has examined the filings of the APTransco on the investment plan and amount of investment required and found that the investment plan proposed by APTRANSCO is quite ambitious keeping in mind the system requirements and the pace of capital expenditure in the past. The

Commission, while approving the investment plan has taken into consideration the following issues.

- Power evacuation requirements dovetailing with the implementation schedules of State Generating Plants pertaining to APGENCO, Singareni power station at Jaipur in Adilabad district, Hinduja Plant at Visakhapatnam and other plants awarded through Case-I bidding etc.
  - Evacuation of Power from Renewable Sources, such as Wind sources in Kadapa, Kurnool & Anantapur Districts and solar power source from various locations in the state of AP.
  - System improvement and strengthens works required to meet the projected load growth and system during the control period.
  - Renovation & Modernisation requirements during the control period.
  - Investment schemes which have already been approved by the Commission, presently are under various phases of implementation.
  - Pace of capital expenditure during in the Second and Third Control Period.
  - Reasonableness of the proposed investment schemes during the third Control Period.
  - The Cost of Investment of Lift Irrigation schemes being contributory in nature and borne by GoAP, are not considered. Further, upstream network augmentation for LI schemes is included in system strengthening works at corresponding voltages.
  - Investment in Telecom is included in corresponding works at different voltages.
36. After careful consideration of the above issues, the Commission has regulated the base investment amount to Rs.9141 Cr. against the filed amount of Rs.13,960 Cr. for the Control Period. Though the proposed capital investment plan by APTRANSCO is ambitious when compared to its historical spending and capitalization, it is necessarily needs to accelerate its pace of expenditure during the third control period to buildup more network elements given the system requirements particularly in terms of power evacuation. The details of investment approved by the Commission are given in the Table below:

**Table No.4.3 - Year wise Investments approved, (Rs. Cr.)**

Financial Year	Evacuation and System Improvement		Renovation and Modernization	Total
	440 KV	220 and 132 KV		
1	2	3	4	5
2014-15	1564.00	1339.60	73.80	2977.40
2015-16	2178.20	861.60	98.50	3138.30
2016-17	1034.60	379.40	98.30	1512.30
2017-18	328.20	384.90	98.40	811.60
2018-19	176.10	401.90	123.20	701.20
<b>Total</b>	<b>5281.10</b>	<b>3367.50</b>	<b>492.20</b>	<b>9140.80</b>

The Commission determined the network elements (substations) to be added in the Control Period based on which the investments are approved.

**Table No.4.4 - Year wise additions of substations approved in Nos.**

Addition of Sub Stations for 3 <sup>rd</sup> Control period in Nos.						
Voltage level	2014-15	2015-16	2016-17	2017-18	2018-19	Total for Control period
400 KV	3	3	2	2	1	11
220 KV	4	8	9	9	6	36
132 KV	15	16	12	15	16	74
<b>Total Additions</b>	<b>22</b>	<b>27</b>	<b>23</b>	<b>26</b>	<b>23</b>	<b>121</b>

## CHAPTER - V

### TRANSMISSION LOSS TRAJECTORY

#### *MYT Loss Reduction Target and System Availability*

37. APTRANSCO filed the transmission loss reduction trajectory and also transmission system availability for each year of the Control Period as regulated by Regulation No.5 of 2005.
- It proposes that the average loss be reduced from 4.15 percent in 2014-15 to 3.95 percent by 2018-19, i.e. the end year of the Control Period,
  - The average loss reduction target as proposed by APTRANSCO is subject to  $\pm 0.3$  variation condition, as the loss band.
  - APTRANSCO further stated projected system availability at 99.50 percent for all the years of the control period.
38. The loss band is stated to be subject to the investment levels proposed by APTRANSCO. There may be variations in loss reduction path consequent to change in investments. The details are given below.

**Table No.5.1 - Filings: Transmission loss, band and system availability,(%)**

Financial Year	Average Transmission Loss	Transmission Loss, Upper Band	Transmission Loss, Lower of Band	Target System Availability
1	2	3	4	5
2014-15	4.15%	4.45%	3.85%	99.50%
2015-16	4.10%	4.40%	3.80%	99.50%
2016-17	4.05%	4.35%	3.75%	99.50%
2017-18	4.00%	4.30%	3.70%	99.50%
2018-19	3.95%	4.25%	3.65%	99.50%

*Figures are rounded.*

#### *Objections/Suggestions regarding Transmission Losses projected for 3<sup>rd</sup> Control Period*

39. Dr M Thimma Reddy, Sri T Harish Rao & Sri G Diwakar and others submitted that when the transmission losses reached 3.97% in the year 2012-13 (p.5) the

proposed losses for the third control period started with 4.15% for the year 2014-15. Given the huge investments made in the past and proposed to be made in the coming years this in fact shall come down.

**Sri M Venugopala Rao and others** submitted the following: Despite exceeding its net expenditure for a period of six years from 2008-09 to 2013-14 by Rs.796 Cr vis-a-vis the expenditure permitted by the Commission, there has been fluctuation in yearly transmission losses, without steady decline of the same. In other words, the benefit of reduction in transmission losses does not seem to be commensurate with the expenditure actually incurred. Against the target of 4.02% for the last year of the second control period, i.e., 2013-14, the proposed target of reduction of transmission losses by the end of third control period, i.e., 2018-19, of 3.95%, i.e. a reduction of just 0.07% does not seem to be commensurate with the investment and works for strengthening and expanding transmission system proposed by AP Transco. It is strange that despite of incurring huge expenditure, exceeding the limit determined by the Commission, transmission losses continue to fluctuate and increase during the 2nd control period compared to 3.89% (provisional) in 2008-09 and during the 3rd Control Period compared to 3.97% in 2012-13.

**Reply of the Licensee:** APTRANSCO has filed for capital investments of Rs.8428 Cr from FY 2009-10 to FY2013-14 in the ARR MYT filing; but, APERC has approved Rs. 4900 Cr only for the above period, which is not sufficient enough to reduce Transmission loss considerably. The actual transmission loss for FY 2011-12 is 4.22% and for FY2012-13 is 3.97%. The percentage Transmission Loss depends on the MW load being handled by the system. It is to be noted that, the present transmission loss is below 4.0% as AP power system is operating at reduced demand but not due to high capital investment and once Transco network starts meeting unconstrained demand, the Transmission loss figure would again go up to 4.15% because transmission loss is purely a technical loss ( $i^2 R$ ).

### ***Commission's View on Transmission Loss***

The Commission has examined the actual percentage of loss achieved and loss trajectory approved in second control period upto FY2012-13. The Commission also examined the targeted percentage of loss projected by AP Transco for every year for third control period. The Commission notes that the Loss Trajectory proposed for FY2014-15 and FY2015-16 is higher than the Loss Trajectory already approved for FY 2013-14 in the second Control Period and achieved by APTRANSCO in 2012-13 (3.97%). Normally the percentage loss should successively reduce after undertaking substantially investments towards renovation & modernization of network and expansion of network. The Commission agrees that incremental costs of loss reduction below an optimum level will be substantially high and not economic. Keeping these factors in mind the Commission decides that for FY2014-15 and FY2015-16, the percentage of loss level shall be maintained at least to that of loss level approved for FY2013-14. Accordingly the Commission has determined the percentage loss trajectory as indicated in the table below.

**Table No.5.2 - Year wise Loss Trajectory approved**

<b>Year</b>	<b>Transmission Loss (percent)</b>
2014-15	4.02
2015-16	4.02
2016-17	4.01
2017-18	3.98
2018-19	3.95

Ensuing of the achieving the above reduction in the transmission losses demands a holistic systematic approach towards monitoring of loading of power transformers. In view of existing incentive and penal mechanisms under MYT framework, the Commission wishes to leave ways and means of loss reduction to the discretion of APTRANSCO.

APTRANSCO shall put the losses to user account provisionally at average transmission loss approved by the Commission. Upon the availability of actual transmission losses, APTRANSCO may settle the final energy account

for users of the transmission system. In this context, the Commission directs that;

***APTRANSCO shall put up a transparent energy accounting system based on boundary meter readings to arrive at monthly energy losses in the transmission system and seek the approval of the Commission for such measurement mechanism. Upon approval of the Commission, APTRANSCO shall use such accounting mechanism to settle the transmission losses to user accounts on actual basis. Till such time, APTRANSCO shall apply only the average transmission losses approved in this Order for energy settlement.***

Further, the Commission intends to put incentive/penal mechanism for APTRANSCO with regard to transmission loss reduction path during the Control Period. In this context, the Commission provisionally approves the following;

- a) APTRANSCO can collect 10 percent of weighted average variable cost of energy purchased in that year from transmission users, in case the actual transmission loss is below the approved level of losses for that year.
- b) APTRANSCO shall pay 10 percent of weighted average variable cost of energy purchased in that year to transmission users, in case the actual transmission loss is higher than the approved level of losses for that year.



## CHAPTER - VI

### REVENUE REQUIREMENT

40. The ARR amount for a year refers to the amount that is required for APTRANSCO to meet sum of estimated costs and allowed Return on Capital Employed (RoCE) as per Regulation 5 of 2005, for transmission activity. The RoCE depends on the investment required to meet the forecasted transmission capacity requirement for each year of the Control Period. APTRANSCO projected on ARR of Rs.18401.22 Cr. After deducting Rs.233.16 Cr. arising from the surplus amount arrived due to true up in the second control period. After deducting the Non-Tariff Income (NTI), and the expenses capitalized tariff, APTRANSCO placed the net ARR at Rs.17257.50 Cr for the entire Control Period as per the table below:

**Table No.6.1 - Filings-Net Aggregate Revenue Requirement, FY2014-15 to 2018-19, (Rs. Cr.)**

Financial Year	Gross Revenue Requirement	Less		Net Aggregate Revenue Requirement
		Expenses Capitalized	Non-Tariff Income	
1	2	3	4	5(2-3-4)
2014-15	2053.45*	176.07	43.64	1833.73
2015-16	3015.45	192.02	67.52	2756.19
2016-17	3960.27	172.48	36.44	3751.36
2017-18	4482.07	171.03	62.60	4248.44
2018-19	4889.69	186.69	35.26	4667.75
<b>Total</b>	<b>18400.93</b>	<b>898.29</b>	<b>245.46</b>	<b>17257.47</b>

*Figures are rounded.*  
*\* Deducted Rs 233.16 Cr towards surplus amount arrived in the second control period.*

41. The Revenue Requirement consists of A) Asset Base & Depreciation, B) RoCE which inturn depends on Regulated Rate Base, D/E mix, Cost of debt and equity and working capital, C) Operation and Maintenance cost and D) Taxes on Income revenue item Costs.

**A. Asset Base & Depreciation**

42. APTRANSCO projected the year wise asset base for the third control period based on the approved investment plan. The depreciation amount was computed based on item wise asset base created, using rates notified by Ministry of Power, Government of India. Applying these rates on forecasted assets, the depreciation amount is computed at Rs.4247.03 Cr. for the entire Control Period while giving the details for each year. The year wise asset base and depreciation amounts as filed by AP Transco for the control period is shown in the following Table.

**Table No. 6.2 - Year wise Asset Base and Depreciation filed**

Financial Year	Asset base in Rs. Cr.	Depreciation in Rs. Cr.
2014-15	13935.09	560.22
2015-16	20212.75	708.29
2016-17	23310.31	1067.32
2017-18	26102.27	1244.41
2018-19	28227.57	1346.79
<b>Total</b>	<b>111787.99</b>	<b>4927.03</b>

**Objections/Suggestions regarding Depreciation**

43. Sri Badrinath and others have submitted the following: The actual addition to Gross Fixed Assets is lower by INR 1,900 Cr vis-a-vis asset additions envisaged in the tariff order for the period FY2010-14. This is mainly due to delays in execution of projects. Actual Gross Depreciation from FY2008-09 to FY2012-13 Period is Rs.1,713 Cr. as compared to Rs.1,686 Cr approved by the Hon'ble Commission. This is mainly due to a difference in the methodology adopted for depreciating assets. Further, APTRANSCO did file the depreciation on the assets using the rates notified by Ministry of Power (GoI) in their Gazette. However Hon'ble Commission has determined the depreciation amount in the Tariff Order duly adopting the CERC rates for transmission assets in accordance with Regulation 5 of 2005. Licensee is accounting for depreciation in the books of Accounts year on year since the formation, as per the rates prescribed in the MoP Gazette. Further as per the item no.5 of Annexure - 3 of the filing,

APTRANSCO shall file a comparative statement with the Commission on completion of Annual Accounts on depreciation amount calculated following the regulatory principles as stated in Regulation 5 of 2005 and as per approved Statutory Annual Accounts with possibly for FY2007-08 onwards. It shall file this statement with the Commission FY2008-09 onwards without fail. APTRANSCO stated that they have complied with the directive. However, neither the Commission nor the Company (TRANSCO) published the statement with filing. Objectors requested the Commission to publish the same for public information and proper understanding of the filing.

**Reply of the Licensee:** Statement showing the year wise depreciation on the fixed assets of APTRANSCO as per MOP, GOI rates and CERC rates for the FY2008-09 to FY2012-13 are shown below.

Year	Depreciation Amount in Rs Cr	
	As per MoP, Gol	As per CERC
2008-09	291.13	248.73
2009-10	317.39	272.29
2010-11	337.56	287.27
2011-12	380.34	327.55
2012-13	390.30	363.66

***Commission's View:***

The Commission notes that depreciation rates historically applied by APTRANSCO were based on the rates approved by Ministry of Power, Government of India rates. These rates have been applied in its annual accounts, since the creation of APTRANSCO. Reviewing this practice and adopting a different depreciation system (i.e. depreciation rates as per CERC) now will require a very high compliance cost. Further, allowing two different system of depreciation to prevail (one adopted by the Commission and the other by APTRANSCO), will lead to complications in the True up exercise with possible deleterious impact in the monitoring of efficiency gains by the Commission. It is also noted that the APERC Regulation No.5 of 2005 provides for determination of depreciation “generally” based on the methodology adopted by CERC. Clearly adequate scope exists in the regulation itself to

adopt a broader interpretation if the situation so demands. In view of the above the Commission is of the view to adopt the depreciation rates approved by the Ministry of Power for determination of transmission tariff for the third control period for Calculation of Depreciation as per Clause No.25 (2) of the Regulation No.5 of 2005.

44. **Sri MR Prasad of AP Ferro alloy Producers Association and others** submitted the following: Tariff Regulations provide that the methodology, rates and other terms for allowing depreciation should be in line with the CERC Regulations. Clause 17 of the CERC (Terms and Conditions of Tariff) Regulations, 2009 that provide the rationale, methodology and rate for allowing depreciation. It provides that depreciation shall be calculated annually based on Straight Line Method and at the rates specified in Appendix-III to those regulations. An average depreciation rate of around 5.28% is allowed by the CERC Regulations, 2009. However, APTRANSCO has claimed the depreciation rates as per the Ministry of Power Guidelines which translates to a weighted average rate of over 7.84%. Commission may allow the depreciation strictly in accordance with the CERC Regulations for the years being tried up and for the third control period. Commission may also ensure that the depreciation may be capped up to 90% of the capital cost. The past Tariff Orders issued by the Hon'ble Commission do not clearly provide the information w.r.t to accumulated depreciation and the % of depreciation already claimed on the GFA base by APTRANSCO. Hence, Tariff Orders for the third control period & True up Orders for the second control period may provide a detailed computation w.r.t to the accumulated depreciation and the % of depreciation already claimed on the GFA base.

**Reply of the Licensee:** Depreciation has been calculated on the 100% value of the asset considering the depreciation rates notified by the Ministry of Power, Govt. of India duly limiting the depreciation to 90% of the Asset value.

**Commission's View:** Objection is similar to the earlier objection and has already been dealt with. Regarding second part of the objection the Commission has prudently verified on the depreciation details and also found that depreciation is limited to 90% on each item of the fixed asset where

indicated the item fully depreciated. After thorough verification, the Commission has determined the year wise quantum of depreciation.

***Commission determination on asset base and depreciation:***

The Commission has examined the asset base and depreciation amount filed by the Licensee. During the discussions with APTRANSCO, the Commission has noted its determination on depreciation as the following features:

- a) It has uniformly adopted the depreciation rates announced by Ministry of Power, Government of India for the purpose of its Annual Accounts.
- b) APTRANSCO is computing the depreciation on all assets irrespective of funding in view of statutory requirements for Annual Accounts.
- c) The depreciation amount shown in Annual Accounts is higher than the depreciation amount actually recovered through tariffs.

The Commission has carefully considered the issue of as to how depreciation allowance should be applied in determining TRANSCO's ARR. As per para 15.2 of Regulation 5 of 2005, the depreciation allowance for each year of the Control Period shall be determined, generally based on methodology rates and other terms as decided by CERC from time to time. One of the objectors has argued that rate approved by CERC at 5.2% is lower than the rate of 7.84% adopted in the filings and this leads to a higher charge. The Commission notes that depreciation rates historically applied by APTRANSCO have been the rates approved by Ministry of Power, Government of India rates. These rates have been applied in its annual accounts, since the creation of TRANSCO. Reviewing this practice and adopting a different depreciation system now will require a very high compliance cost. Further, allowing two different systems of depreciation to prevail (one adopted by the Commission and the other by APTRANSCO), will lead to complications in the True up exercise with possible deleterious impact in the monitoring of efficiency gains by the Commission. It is also noted that the regulation provides for determination of depreciation "generally" based on the methodology adopted by CERC. Clearly adequate scope exists in the regulation itself to adopt a broader interpretation if the situation so demands.

Accordingly, under section 25 (2) of the Regulation, the Commission adopts the depreciation rates approved by the Ministry of Power for determination of transmission tariff for the third control period for the following reasons:

- (a) APTRANSCO has already been adopting the Ministry of Power notified depreciation rates since its inception. Switching to a new method which has to be applied individually to a significantly large number of listed assets will involve an unacceptably high compliance burden.
- (b) Asking APTRANSCO to adopt two different depreciation rates - one for annual accounts and one for regulatory accounts may impair the efficiency of the True up exercise conducted by the Commission with consequent deleterious impact on the efficiency gains which may be discoverable during such exercise.
- (c) The Commission's determination in the 1<sup>st</sup> Control Period also permitted depreciation based on the Ministry of Power rates. During the 2<sup>nd</sup> Control Period CERC rates were adopted by the Commission though APTRANSCO continued to maintain its account on par with the method proposed by Ministry of Power. The Commission can make a more informed Judgment using the numbers available in the audited accounts of APTransco.
- (d) Regulation 15.2 permits the Commission to determine the depreciation allowance only "generally" based on the CERC guidelines. It does not mandate a complete and total adoption of the CERC guidelines. Therefore, adequate allowance exists for adopting such an interpretation.
- (e) As noted by the Licensees in their response, the difference in depreciation between the two methods is not substantial - varying from Rs.43 cr. in 2008-09 to Rs.27 cr. in 2012-13.

The Commission after considering the above points and also the views of the objectors has computed the year wise asset base and depreciation amounts based on the Commission's approved investment and capitalization schedule for each year of the control period. The Commission worked out the asset base for the purpose of computing depreciation at the beginning of each year of the

Control Period. Following Regulation 5 of 2005, the assets not funded by APTRANSCO, such as assets funded by consumers, and through grants have been removed from the asset base prior to computing depreciation.

As per the Commission's determination, the depreciation amount is Rs.4247.03 Cr. as against Rs.4927.03 Cr. filed by APTRANSCO for the entire Control Period. The details of asset base and depreciation filed and approved are given in below Table. The Gross fixed Assets, depreciation values etc., are annexed in the Annexure: E.

**Table No.6.3 - Asset Base and depreciation for the Control Period, (Rs. Cr.)**

Financial Year	Asset Base at the beginning of the Year		Depreciation	
	Filing	APERC	Filing	APERC
1	2	3	4	5
2014-15	13935.09	13604.08	560.22	560.22
2015-16	20212.75	17963.47	708.29	686.59
2016-17	23310.31	20149.04	1067.32	918.56
2017-18	26102.27	21655.87	1244.41	1035.26
2018-19	28227.57	23134.56	1346.79	1046.40
<b>Total</b>	<b>111787.99</b>	<b>96507.02</b>	<b>4927.03</b>	<b>4247.03</b>
<i>Figures are rounded</i>				

### ***B. Return on Capital Employed (RoCE)***

#### ***(i) Debt and Equity Ratio (Mix) : Filing and Determination:***

As per the clause 13.1 of the Regulation 5 of 2005 of APERC the Debt/Equity (D/E) ratio shall be determined at the beginning of the control period after considering the Transmission licensees proposals, previous D/E mix, market condition and other relevant factors. After examining the licensee proposal and previous year D/E mix, the Commission approves the debt-equity mix of 75:25 percent throughout the Control Period as filed by the licensee. This approved debt equity ratio is used in computing the return on capital throughout the 3<sup>rd</sup> Control Period.

#### ***(ii) Cost of Debt and Return on Equity:***

The Licensee filed the cost of debt and return on equity in percent for each year of the Control Period which are used to compute the Return on Capital Employed (RoCE). The Licensee has filed the cost of debt at 12 percent and return on equity at 14 percent per annum.

### **Determination of Cost of Debt and Return on Equity:**

As per clause 13.1 of Regulation 5 of 2005, the cost of debt (rd) shall be determined at the beginning of the control period after considering the Licensee proposals, present cost of debt (rd), market conditions, other relevant factors and in case of return on equity(re) apart from the above, CERC norms to be considered while determining the Return on Equity. After examining the licensee proposal and other aspects contained in the Regulation, the commission determined the cost of debt at 12% and return on equity at 14% as filed by the licensee for each year of the 3<sup>rd</sup> control period.

#### ***(iii) The Return on Capital (Weighted Average Cost of Capital or WACC):***

Using the proposed debt-equity ratio 75:25, cost of debt 12% and return on equity 14%, the licensee computed the return on capital (WACC) of 12.5% as per formulae provided in Regulation 5 of 2005.

$$\text{WACC} = (D/E)*rd/(1+D/E)+(re/(1+D/E))$$

The Commission computed the WACC which works out 12.5% using determined D/E mix of 75:25, cost of debt 12% and return on equity 14%.

#### ***(iv) Working Capital:***

APTRANSCO though identified the working capital requirement for R&M stores, but not taken its carrying cost as expense in working capital amount in Regulated Rate Base (RRB). AP Transco has not furnished the details of appropriate inventory level of O&M stores required with item wise cost details along with carrying cost worked out. Hence Commission has not considered the carrying cost on R & M stores.

The working capital is estimated by the Commission for 45 days requirement of O&M cost as per the Regulation 5 of 2005. Working capital is considered for computing RoCE as per Regulation 5 of 2005. The details are given in Table below



**Table No.6.4 - Year wise Working Capital filed and approved**

Financial Year	Working Capital In Rs. Cr	
	Filing	APERC
2014-15	100.39	80.91
2015-16	114.96	88.15
2016-17	131.47	96.11
2017-18	149.21	104.24
2018-19	169.09	113.19
<b>Total</b>	<b>665.12</b>	<b>482.60</b>

***(v) Regulated Rate Base (RRB) & Return on Capital Employed:***

As per the Regulation 5 of 2005, APTRANSCO is permitted to claim the Return on Capital Employed (ROCE). The amount claimed in this manner is expected to meet the cost of debt and equity capital which is used to finance the assets in the transmission business. The three regulatory steps to be taken to determine Return on Capital Employed are as below:

- a) The Regulatory Rate Base (RRB) is determined.
- b) The Return on Capital is worked out based on i) debt-equity ratio, ii) cost of debt and iii) return on equity.
- c) The Return on Capital is applied to RRB to arrive the RoCE for each year of the Control Period.

APTRANSCO worked out RRB as Rs.60092.97 Cr. for the Control Period. The Return on Capital was worked out at 12.5 percent using a 75:25 debt equity ratio with cost of debt and return on equity being taken at 12 percent and 14 percent respectively.

Applying the Return on Capital of 12.50 percent on the RRB, APTRANSCO computed the RoCE at Rs.7511.63 Cr. for the Control Period while giving the details for each year of the Control Period.

***Objections/Suggestions regarding Regulated Rate Base (RRB)***

45. Sri MR Prasad of AP Ferro Alloy Producers' Association and others submitted that Regulated Rate Base and Return on Capital Employed be computed strictly in accordance with the Tariff Regulations.

Sri T Harish Rao, Dr M Thimma Reddy & Sri G Diwakar and others submitted that for the year 2013-14 while the Commission allowed Rs.6,287.84 Cr. towards RRB, TRANSCO claimed Rs.4,818 Cr. only. Similarly while the Commission allowed Rs.692 Cr. towards Return on Capital Employed (RoCE), TRANSCO claimed Rs.602 Cr. only. This implies that the capital employed by TRANSCO is less than that taken in to account while deciding the transmission tariff. Commission to re-examine the transmission tariff allowed during the second control period and to take this experience in accounting while deciding the transmission tariff for the ensuing year (2014-15).

**Reply of the Licensee:** Regulated Rate Base and Return on Capital Employed is calculated as per the methodology prescribed in Regulation 5 of 2005.

The following are main factors contributed for a lower RRB of Rs.4819 Cr, as against the Tariff Order approved RRB of Rs.6288 Cr, for FY 2013-14 (a) Lower capital investment (positive element in calculation of RRB) due to delay in execution of capital works like land acquisition issues, Right of Way (RoW) problems etc., (b) Higher Accumulated Depreciation (negative element in calculation of RRB) due to difference in depreciation rates for calculation of depreciation i.e., APERC has adopted CERC notified depreciation rates for calculation of depreciation, whereas APTRANSCO has adopted depreciation rates as notified by the MoP, GoI for calculation of depreciation; (c) Higher Consumer Contributions (negative element in calculation of RRB) towards cost of capital assets than the APERC approved amounts for 2<sup>nd</sup> Control Period (mainly towards cost of Lift Irrigation Assets of GoAP); However, APTRANSCO has claimed Return on capital for 3<sup>rd</sup> Control Period (FY 2014-15 to FY 2018-19, based on RRB (actual up to FY 2012-13) and projected capital investment from FY 2013-14 to FY 2018-19.

**Commission's View:** The reply given by the Licensee on the reasons for a lower RRB than that approved in the earlier MYT order is found to be reasonable. The deviations in the RoCE due to lower RRB will be integrated into the true up for the second Control Period to be under taken in the future. Regarding the filing for the 3<sup>rd</sup> control period, the Commission has thoroughly

scrutinized the filings and has approved only Rs.47140.49 Cr. against an RRB amount Rs.60092.97 Cr. filed.

The Commission has regulated the RRB as under:

- a) The approved investment and capitalization schedule for each year of the Control Period have been taken into account for computation of the RRB.
- b) The working capital requirement is computed for O&M by considering 45 days equivalent of approved O&M expenses for each year of the Control Period.
- c) The opening value of the asset base is computed by excluding the amounts not funded by APTRANSCO, such as assets funded by consumers and grants received.
- d) The cost of debt is determined at 12 percent in the previous paras.
- e) The return on equity is determined at 14% in the previous paras.
- f) The Return on Capital (WACC) is determined as 12.5% in the previous paras.

With the above modifications in RRB calculations, the Commission computed the RoCE at Rs. 5892.57 Cr. for the Control Period. The details of RRB and RoCE are given in Table below.

**Table No.6.5-Regulated Rate Base and Return on Capital Employed, (Rs.Cr)**

Financial Year	Regulate Rate Base (RRB)		Return on Capital Employed (RoCE)	
	Filing	APERC	Filing	APERC
1	2	3	4	5
2014-15	6453.96	6079.52	806.75	759.94
2015-16	9750.92	8255.36	1218.87	1031.92
2016-17	13216.56	10382.54	1652.07	1297.82
2017-18	14801.91	11038.70	1850.24	1379.84
2018-19	15869.62	11384.37	1983.70	1423.05
<b>Total</b>	<b>60092.97</b>	<b>47140.49</b>	<b>7511.63</b>	<b>5892.57</b>
<i>Figures are rounded</i>				

**C. Operation and Maintenance Costs**

46. The operating and maintenance (O&M) cost consist of a) employee cost, b)Repair and Maintenance (R&M) cost and c)Administration and General (A&G)

expenses. APTRANSCO projected the O&M cost for each year of the Control Period fixing the O&M norms as per the principles stated in the Regulation 5 of 2005. The O&M norms were computed adopting the following procedure:

- a) The Actual O&M Cost for FY2012-13 (Rs.477 Cr.) was considered as the base year for the projections as the actual O&M cost for FY2013-14 was not available.
- b) O&M Cost for FY2012-13 was allocated in the ratio of 30:70 to the length of lines in Ckt Km and the No. of substations respectively.
- c) The existing length of line in Ckt Km and the no. of substations / total no. of bays in the base year were taken as the basis for computation and computed the norms at the rate of Rs.41742/Ckt Km for lines and Rs.12,12,258/bay for substations.
- d) For estimating O&M expenses for FY2013-14 and for the 3<sup>rd</sup> Control Period, an escalation rate of 9.25% was adopted based on the 3 years average Wholesale and Retail Price Indices. Accordingly, base year (FY2013-14) O&M cost for Ckt Km of line was estimated at Rs.45,605 and O&M cost per bay of substations estimated at Rs.13,24,448.

Total incremental O&M expenses per year were computed by the additional length of line in Ckt Km and no. of new bays in substations for each year of the Control Period with these norms consistent with the projections in the approved investment plan.

APTRANSCO in its filing stated that the above O&M projections have not factored in the wage revision which is due w.e.f.1<sup>st</sup> April 2014 and financial commitment of wage revision will be claimed based on actuals.

The estimated O&M expenses were capitalized with reference to proposed investments for each year of the Control Period. Using these parameters, APTRANSCO estimated the gross O&M cost at Rs.5117 Cr and net expenses Rs.4219 Cr duly capitalizing the expenses of Rs.898 Cr for the entire Control Period as indicated in the Table below:

**Table No.6.6 - Year Wise O&M Expenses filed, (Rs. Cr)**

Year	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Gross O&M Cost	804	914	1004	1122	1274	5117
O &M expenses capitalized	176	192	172	171	187	898
Net O &M expenses	628	722	831	951	1088	4219

***Objections/Suggestions regarding O&M Expenses for 3<sup>RD</sup> Control Period***

47. Sri MR Prasad of AP Ferro alloy Producers Association and others submitted the following: O&M expenses approved by the Hon'ble Commission for FY 2013-14 are to the tune of Rs. 385.15 Cr as per the Order dated 20<sup>th</sup> March, 2009. Against this, the O&M expenses claimed for FY 2014-15 are Rs. 627.72 Cr which is an increase by a massive 63%. Further the year on year increase in O&M expenses in the remaining years of the third control period is in the range of 14.4% to 15.2%. Such abnormally high increase is totally unjustified and should not be allowed. APTRANSCO has stated that employee expenses contribute around 60% of the total O&M expenses and other expenses contribute 40%. For estimating the employee expenses in the third control period, a 3 year average Consumer Price Inflation (CPI) (9.97%) escalation has been considered for employee expenses and a 3 year average Wholesale Price Inflation (WPI) (8.2%) has been considered for the other O&M expenses by APTRANSCO. APERC should conduct a mid-term review of O&M expenses of APTRANSCO, in line with the Draft Regulations of CERC and based on a mid-term review of the normative O&M cost moderate the O&M expenses of APTRANSCO and allow only an escalation index in the range of 4% during the control period. The general practice widely adopted by CERC and various State Commissions is to consider the weights of 60:40 for WPI to CPI, as against the weights proposed by the APTRANSCO. Employee expenses should be allowed considering number of employees, number of retirements and new recruitments to be submitted by APTRANSCO.

**Reply of the Licensee:** O&M Cost indexation for 3<sup>rd</sup> Control Period is arrived based on the analysis of actual O&M Cost for the 2<sup>nd</sup> Control Period. In indexation 40% weightage is given to WPI and 60% weightage given to CPI. Also A&G expenses of APTANSCO are much lower than those in other States and

PGCIL. Hence it not appropriate to compare only some time items with other utilities. Different State Commissions consider the different weights of WPI & CPI in arriving at O&M indexation as per their nature of O&M expenditure.

APTRANSCO's Actual O&M Cost per Bay and per Circuit Kilometer is less than 50% of the CERC approved O&M Norms for the 2nd Control Period. Hence it is not appropriate to compare APTRANSCO's projected O&M indexation factor with CERC Norms for 3rd Control Period. It is also to inform that APTRANSCO's Actual O&M cost is less than the other similar state transmission utilities like Gujarat, Maharashtra & Tamilnadu O&M Cost.

**Commission's View:** The Commission has adopted the requirements of its Regulation 5 of 2005 in determining the O&M expenditure. It fixing the norms for O&M Expenses considering the following parameters.

- a) Actual Gross O&M Expenditure incurred during FY 2012-13.
- b) Length of Transmission lines in Ckt-kM and existing number of bays in Sub stations at the end of FY 2012-13.
- c) The Gross O&M Expenditure was allocated in the ratio of 30:70 between Length of line (Ckt-Km) and number of sub-stations as per Regulation 5 of 2005 of APERC.
- d) The allocated expenditure to Substations is further divided to number of bays.
- e) The norms thus arrived for FY 2012-13 was escalated at a rate of 4.20% for Lines and Substations to arrived norms for base year FY 2013-14. An escalation factor of 4.20% (as per the CERC guidelines for these years) was adopted to determine the cost norms for each year of the third control period.

The year wise O&M expenditures are arrived based on the approved length of lines and number of bays in sub-stations approved in the Resource plan for the Control Period.

***Objections/Suggestions regarding O&M expenses of 2<sup>nd</sup> Control Period***

48. Sri MR Prasad of AP Ferro Alloy Producers' Association and others submitted as follows: The true up of O&M expenses should be allowed only on the basis of

audited accounts. Further, as per the framework of the Tariff Regulations, the O&M expenses have been categorized as “Controllable Expenses” and variations on this account are not allowed to be trued up. Only the variations which are due to force majeure factors are allowed to be considered in truing up. The increase in fuel costs, travelling and vehicle hire expenses and increase in R&M expenses are clearly not force majeure factors. Further, the DA hike and new recruitment were already considered in the second MYT order as escalation was allowed in that order. The increase in the employee expenses consequent to wage revision has to be looked into by the Hon’ble Commission and a strict prudence check is required. Automatic availability of benefits generates inefficiency and indolence. No blanket allowance in respect of employee expenses may be allowed.

**Sri T Harish Rao, Dr M Thimma Reddy & Sri G Diwakar and others** have submitted as follows. During the period 2008-09 to 2012-13 O&M costs increased by Rs. 441 Cr. and during the year 2013-14 it increased by Rs.234 Cr. During the public hearing on transmission tariff for the second control period several objectors raised concerns over the ballooning O&M costs (Paragraphs 23 & 24, Transmission Tariff Order, 20<sup>th</sup> March, 2009). Pampering of a few shall not be allowed at the cost of crores of consumers in the state.

**Sri M Venugopala Rao and others** have submitted as follows: O&M expenditure, including expenditure on pay and allowances to employees, of AP Transco should be limited in consonance with the norms prescribed by the Commission. However, AP Transco is claiming higher expenditure on pay and allowances exceeding the limits prescribed in the norms of the Commission. For the year 2013-14, AP Transco has claimed a revised O&M expenditure of Rs.658 Cr. against Rs.424 Cr. permitted in the tariff order, i.e., an excess of Rs.234 Cr and maintained that it is mainly due to wage revision. It has also claimed a revised revenue deficit of Rs.43 Cr. for the year 2013-14. Here, it is pertinent to remind that the Commission had taken an expected increase of 10.57 per cent per annum in O&M expenditure into consideration for the second control period (page 28 of tariff order). How many posts have been filled up by AP Transco during the second control period against the posts

proposed to be filled up during the same period? How many sanctioned posts in AP Transco are yet to be filled up? How many posts it proposes to fill up during the third control period? How many personnel AP Transco has been engaging on contract/casual/outsourcing basis either directly or through contractors? For the 3<sup>rd</sup> control period, AP Transco has projected a total of Rs.4219 Cr. towards net O&M expenses and Rs.5117 Cr. towards gross O&M expenses. It has also pointed out that “the financial commitments of wage revision will be claimed based on actual”. In other words, AP Transco is indicating that norms of O&M expenditure determined by the Commission will have no bearing on wage revision and pay and allowances or that it would not adhere to those norms. If additional O&M expenditure as is being claimed by the utilities is allowed as pass through by the Commission, irrespective of its norms, then there will be no prudent limitations to such expenditure.

**Reply of the Licensee:** As per the regulation No 5 of 2005, “The transmission licensee has to file its proposal for pass-through as well as sharing of gain/losses on variation in ‘uncontrollable’ items of ARR and Controllable items (indexed to external parameters) in accordance with Clause 10 the above Regulation and for the purpose of sharing gains and losses with the users, only aggregate gains or losses for the Control Period as a whole would be considered.

The O&M norms as approved by the Hon’ble Commission had allowed for an annual increase of 10.5% for the second control period. This increase did not factor in the pay revision/ fitment (step increase) which happened in 2010. This annual increase in O&M cost approved was 10.5% while the CAGR of O&M expenses for the period FY 2009-10 to FY 2012-13 was 15.8%. But the actual inflation during this period was around 10.3%. This implies an incremental escalation of 5.3% per annum, mainly due to high inflation rate and pay revision. More over the cost of the outsourcing has increased three times. Employee cost to the extent of cost inflation (DA) and Pay revision are external parameters and these parameters are beyond the control of licensee. Hence ARR Petition filed before Hon’ble Commission details the total truing up gap/surplus arising out of the deviations in both “uncontrollable” and



“controllable” items for the period of FY2008-09 to FY2012-13. APTRANSCO’s Actual O&M Cost per Bay and per Circuit Kilometer is less than 50% of the CERC approved O&M Norms for the 2<sup>nd</sup> Control Period. Hence it is not appropriate to compare APTRANSCO’s projected O&M indexation factor with CERC Norms for 3rd Control Period. Moreover, APTRANSCO’s Actual O&M cost is less than the other similar state transmission utilities like Gujarat, Maharashtra & Tamilnadu O&M Cost.

Recruitment was taken up for 946 posts during the 2nd Control Period against 962 posts which were proposed to be filled up during the same period. While arriving at the number of posts proposed to be filled up during the third control period, 2439 posts are taken for the year FY2013-14, for which approval has been already received from Govt. For the remaining years, i.e., from FY2014-19, 2229 vacancies are proposed to be filled up. Hence during 3rd control period,  $2439 + 2299 = 4738$  vacancies are proposed to be filled up

**Commission’s view:** Commission is unable to consider the true-up proposals filed by Licensee for the Financial Years 2009-10 to 2012-13 in this order, as 2<sup>nd</sup> control period (FY2009-10 to FY2013-14) continues to be in operation and the regulation requires that true up be undertaken only after the control period is complete and audited accounts are available.

***Objections/Suggestions regarding O&M Expenses and Wages of Employees***

49. **Sri Badrinath and Others** submitted the following: One of the major reasons for deviations in ARR was Increase in employee expenses due to pay revision in FY 2010-11, due to which the O&M expenses are considerably higher than the expenses as estimated by the Hon’ble commission in the Transmission Tariff Order FY 10-14. Employee expenses contribute 60% of the total O&M expenses and the other expenses contribute 40%. Thus, APTRANSCO has incurred excess expenditure of Rs 156.70 Cr during first two years of 2<sup>nd</sup> control period. The status of the remaining years may be provided by APTRANSCO in the same format. Further, Commission may direct APTRANSCO to provide the following information: (a) Whether the Pay Revision and the consequent financial impact was approved by Government of Andhra Pradesh without any conditions? Whether the limits imposed by APERC on O&M expenses was brought to the

notice of GoAP while seeking approval of Pay Revision? A Xerox copy of the approval given by Government of AP to pay revision 2010 may be provided (b) whether any approval from APERC was obtained before incurring such huge additional expenditure? (c) How the TRANSCO proposed to fund the additional expenditure incurred?

**Reply of the Licensee:** The figures stated in the objections in O&M expenses are inclusive of SLDC Business also. Following are the O&M expenses (APERC Vs APTRANSCO on actuals)

YEAR	Gross O&M Expenses Approved by APERC	Transmission Actual as per Balance Sheet (Gross amount)	Excess Expenditure incurred above the APERC approved amounts
2008-09	215.87	261.69	45.82
2009-10	281.09	279.60	-1.49
2010-11	321.69	419.83	98.14
2011-12	353.89	501.47	147.58
2012.13	408.85	568.07	159.22

With regard to the Pay Revision, it was submitted in the 2<sup>nd</sup> Control Period that the commitment of wage revision will be claimed based on the actual. Accordingly, the effect of the same is claimed in the O&M charges; Copy of the Pay Revision, approved by GoAP was enclosed with the response to the objector. The commitment on account of wage revision was met through our internal sources/from other income sources.

**Commission's View:** The True up of the Second control period will be taken up after completion of audited accounts for the FY2013-14. At the time of truing up, prudential check will be undertaken on the audited figures given in the absence of norms. Expenses driven by pay revision could be seen as arising from external factors and can therefore be categorised as a pass through.

***Objections/Suggestions regarding Top Level Posts in APTRANSCO***

50. Sri M Venugopala Rao and others submitted that APTRANSCO has become an organization with a swollen head, with many posts of Joint MDs, Directors and Executive Directors; there is need for a fresh look on the desirability of so

many posts and promotions at the top level and prune the same in tune with prudent requirements of business of AP Transco.

**Reply of the Licensee:** As per the Articles of Associations Dt: 31.03.2000, APTRANSCO can have 3 (Three) to 12 (Twelve) Directors in APTRANSCO. However Vide G.O.Ms.No.19, Dt 14.05.2012, GoAP issued orders to rationalize the composition of Board of Directors in APTRANSCO. The number of functional directors including CMD in APTRANSCO was fixed at 6 on administrative reasons.

**Commission's View:** For 3<sup>rd</sup> Control Period the Commission has to determine the norms for O&M expenditure based on substation bays and circuit kilometers. Accordingly O&M expenditure will be arrived at for projected norms. Staff costs have been incorporated in these norms. Redistribution of these costs can be undertaken by APTRANSCO depending on requirement.

***Commission Analysis on O&M Expenses filed & Determination of O&M expenses***

Compared with the actual O&M expenses during the previous year, the projected O&M Cost is observed to be high side and the reasons for such high projections are due to:

- a) The high inflation rate of 9.25% adopted by APTRANSCO for projections of O&M expenses for each year of 3<sup>rd</sup> Control Period.
- b) The projections are also sensitive to filed investment plan that is driven by the number of new substation bays and incremental transmission line proposed to be laid. The investment Plan has been modified by the Commission.

Considering the above issues, the Commission felt that O&M costs need to be regulated. The first step in this has to determine expenditure norms for per unit substation bays and transmission line lengths. The Commission has taken the following issues into consideration.

- a) Actual Gross O&M Expenditure incurred during FY2012-13.
- b) Length of Transmission lines in Ckt-kM and number of bays available in Sub stations in the FY 2012-13.

- c) The gross O&M Expenditure of FY2012-13 has been allocated in the ratio of 30:70 between Length of line (Ckt-Km) and number of sub-stations as provided in the Regulation.
- d) The expenditure allocated to Sub-stations is further divided on the basis of the number of bays in a Sub-station.
- e) The O&M Norms were computed of Rs. per Ckt-km for lines and Rs. per bay for substations for FY2012-13.
- f) The Commission noted the escalation rates provided in the CERC draft regulation of 3<sup>rd</sup> Control Period, to fix the Norms (Rs. per Ckt Km and Rs. per bay for Substations) for O&M expenses for each year of the Control Period. After considering this and other factors, the Commission decided to use the escalation rate 4.20% to base year FY2013-14 and for each year of 3<sup>rd</sup> Control Period.
- g) The Norms thus arrived for FY 2012-13 were escalated at a rate of 4.20% for Lines and bays of substations to arrive the Norms for base year FY2013-14 and norms for each year of the 3<sup>rd</sup> Control Period are indicated in the table below:

**Table No.6.7 - Year wise O &M Norms approved**

Projections	2014-15	2015-16	2016-17	2017-18	2018-19
SS Norm (Rs./bay)	1561811	1627407	1695758	1766980	1841193
LL Norm (Rs./ckt.km)	53766	56024	58377	60829	63384

With the Norms arrived for each year of the 3<sup>rd</sup> Control Period, the O&M expenditure for each year is projected taking into account of the length of lines and number of bays in sub-stations existing and approved by the Commission in the Resource plan for the control period.

Accordingly, the O&M cost was computed for each year of the Control Period and the sum of the gross O&M cost approved for the entire Control Period is placed at Rs.3914.36 Cr against gross O&M cost of Rs.5117 Cr filed. The O&M cost has been regulated downwards by Rs.1202.64 Cr.

APTRANSCO projected a sum of Rs.898 Cr capitalization of O&M expenses for the Control Period based on the projected Investment levels. In tune with the approved investment and O&M cost, the Commission placed the capitalization value of O&M cost at Rs.826 Cr for the Control Period. The details of O&M cost filed and approved by the Commission are given in below Table.

**Table No.6.8 - O&M Costs for the Control Period, (Rs. Cr)**

Financial Year	Gross O&M Cost		Expenses Capitalized		Net O&M Cost	
	Filing	APERC	Filing	APERC	Filing	APERC
1	2	3	4	5	6(2-4)	7(3-5)
2014-15	804	656.25	176	153.10	628	503.15
2015-16	914	714.98	192	168.53	722	546.45
2016-17	1004	779.54	172	158.71	831	620.83
2017-18	1122	845.51	171	164.52	951	680.99
2018-19	1274	918.08	187	181.15	1088	736.93
<b>Total</b>	<b>5117</b>	<b>3914.36</b>	<b>898</b>	<b>826.01</b>	<b>4219</b>	<b>3088.35</b>

**D. Taxes on Income and other Costs:**

51. APTRANSCO, in its filing has estimated taxes on income based on current tax rate of 33%. The Licensee also provided in its filing, Rs.233 Cr as surplus amount obtained during the period FY2008-09 to FY2012-13 to pass on to the consumers as a negative cost item under the head special appropriations. The Table below indicates the details of Taxes and other expenses:

**Table No.6.9 - Year wise details of Income tax and Other costs, (Rs. Cr)**

Year	Income tax	Special appropriations
2014-15	116	(233)
2015-16	175	-
2016-17	237	-
2017-18	266	-
2018-19	285	-
<b>Total</b>	<b>1079</b>	<b>(233)</b>

***Objections/Suggestions regarding Taxes***

52. **Sri Badrinath and others** have submitted the following: As per the ARR filing, the taxes have been estimated based on the current tax rate of around 33%. The taxes have been estimated such that the Post Tax return on equity is equivalent to 14% of RRB for each year. The claim of the Company for post-tax return on equity equivalent to 14% of RRB is not correct. Commission may reject the claim unless such claim can be entertained as per the provisions of CERC regulations.

**Reply of the Licensee:** The Return on Equity allowed is 14% which in principle is the profit for the licensee. Hence, the licensee has computed the income tax at the rate of 33% on this 14% Return of Equity.

**Commission's View:** CERC allows a Return on Equity of 15.5%. In the past the return has been allowed on equity by the Commission is 14% hence reply of Licensee is acceptable.

***Objections/Suggestions regarding Taxes on Income***

53. **Sri MR Prasad of AP Ferro Alloy Producers' Association and others** submitted that Clause 16 of the Tariff Regulations provides that 'taxes on income, if any, on the income stream of the licensed business of the Transmission Licensee shall be treated as an expense and shall be recoverable through ARR'. Corporate Tax is a direct tax on the income stream of a company and as such it is allowable to be recovered as pass through for the beneficiaries upon the actual payment of such tax and not required' to allow the projected tax expense as part of ARR.

**Sri Badrinath and others** submitted that - there was no provision of taxes in the Tariff Order whereas the actual taxes paid were around INR 250 Cr. APTRANSCO has increased its revenue unjustly at the cost of DISCOMs, Consumers and Government and expended a major portion on income tax. Income tax of Corporations is a central receipt and the entire income tax paid by APTRANSCO is an outgo from State Exchequer (a) had APTRANSCO not collected Open access charges from DISCOMs and DISCOM consumers? (b) had APTRANSCO Not collected supervisory charges for LI schemes from GoAP? (c) Had APTRANSCO refunded the excess transmission charges collected by it

to DISCOMs, it would have avoided the Income tax outgo and loss to Government / State Exchequer and it would have also reduced the burden of DISCOMs and retail consumers.

**Reply of the Licensee:** As per Clause 16.1 of Regulation 5 of 2005, "Taxes on Income, if any, on the income stream of the licensed business of the Transmission Licensee shall be treated as an expense and shall be recoverable through ARR". Accordingly, the tax expense on the projected return is claimed in the Aggregate Revenue Requirement (ARR). However, based on actuals, the variation if any (short/excess), will be claimed/passed on, by way of true up.

Regarding (a) collection of Open Access charges, APTRANSCO is collecting open access charges from both long term/short term transmission users, as per the existing Hon'ble APERC Regulations (b) supervision charges are being collected from the consumers/clients including Government works, for carrying out of any DC (Deposit Contribution) works for supervision of construction of the Sub-stations and lines in addition to the cost of the asset (which forms part of material cost, works cost only). These supervision charges are towards deployment of men and using the infrastructure establishment of APTRANSCO for carrying of such DC works. Non collection of such supervision charges from consumers/clients will add to the cost of establishment, which will increase the O&M charges, which is not allowed as per the Regulation 5 of 2005. Therefore, the supervision charges so collected are taken in to other income to offset the impact of O&M charges incurred by the Licensee which is not related to Transmission Business (c) Income Tax is to be paid on the book profits of the company. Transmission charges are collected as per the Tariff order and these are being accounted and accordingly the tax is paid. If there are any excess charges collected from the DISCOMs, it will be passed on by way of true up and not directly adjusting the same for the current year.

**Commission's View:** The reply furnished by the Licensee is found satisfactory.

***Objections/Suggestions regarding Pass Through for FY 2014-15 of special appropriation amount:***

54. **Sri Badrinath and others** submitted the following: Commission had approved an Aggregate Revenue Requirement (ARR) of INR 5,192 Cr for the period FY

2008-09 to FY 2012-13. Based on audited accounts actual ARR cost incurred during the same period is INR 5,446 Cr. whereas, the revenue earned was higher by around INR 488 Cr, mainly due to increase in receipts of Non-Tariff Income on account of supervision charges obtained from government lift irrigation scheme (LIS), delayed payment, interest on reserves etc. There was a net surplus of INR 233 Cr during the period FY 2008-09 to FY2012-13. The Licensee would like to pass this surplus in FY 2014-15.

**Representatives of FAPCCI and others** submitted that the Licensee has not made available the audited accounts for this period to the public and non-submission of audited accounts would be breach of APERC Regulation 2005, the ARR & True Up petition of APTRANSCO is fit to be rejected.

**Reply of the Licensee:** As per Regulation 5 of 2005 of APERC (Terms & Conditions for determination of Tariff for Transmission of Electricity), “The transmission licensee has to file its proposal for pass-through as well as sharing of gain/ losses on variation in ‘uncontrollable’ items of ARR and Controllable items (indexed to external parameters) in accordance with Clause 10 of the above Regulation “and for the purpose of sharing gains and losses with the users, only aggregate gains or losses for the Control Period as a whole would be considered. Hence, ARR Petition filed before Hon’ble Commission details the total truing up gap/surplus arising out of the deviations in both “uncontrollable” and “controllable” items for the period of FY 2008-09 to FY2012-13.

**Commission’s View:** The second control period FY2009-10 to FY2013-14 is not yet completed. Commission is of view not to consider True up for the part of the Control Period now as per Regulation No.5 of 2005 of APERC. True-up proposals filed earlier for 1<sup>st</sup> Control Period (FY2006-07 to FY2008-09), are under scrutiny by commission. The gains or losses found if any, on scrutiny will be taken in this order.

***Determination of Taxes on Income and other costs:***

55. The Commission has examined the proposals of Licensee for payment income tax and other costs in its filings.



The commission has accepted the provisional rate of tax proposed by the Licensee and estimated the post tax return on equity at 14% for each year.

The details of the taxes and other costs worked out are indicated in the below Table.

**Table No.6.10-Year wise details of Income tax and other costs approved,(RsCr)**

Year	Income tax	Special appropriations
2014-15	52.79	(61.73)
2015-16	71.69	-
2016-17	90.16	-
2017-18	95.86	-
2018-19	98.86	-
<b>Total</b>	<b>409.36</b>	<b>(61.73)</b>

#### ***NON-TARIFF INCOME***

56. A major contributor to the non tariff income of the Licensee is supervision charges that are being collected from the Govt. LI schemes and other works executed by the consumers on turn key basis. The Licensee stated that this income from Govt. LI schemes is temporary in nature and will be present for the duration of LI schemes. The other components of non tariff income are from delayed payment charges from consumers, rebate earned from payment to suppliers, income from investments etc., are shown by licensee under this head. The total non tariff income filed by licensee is Rs.245.46 Cr.

#### ***Objections/Suggestions regarding Projection of Non-Tariff Income***

57. **Sri Badrinath and others** have pointed out that under-projection of non-tariff income for the 3<sup>rd</sup> Control Period resulted in higher ARR requirement and higher transmission charges per KW. Referring to the 2<sup>nd</sup> Control period, Objectors submitted that while APERC provided only Rs.117 Cr of Non-Tariff Income for the five year 2<sup>nd</sup> control period, the total non tariff income realized by APTRANSCO was Rs.596 Cr (Rs.45 Cr in 2008-09, Rs.42 Cr in 2009-10, Rs.69 Cr in 2010-11, Rs.151 Cr in 2011-12 and Rs.171 Cr in 2012-13) i.e. a deviation of about Rs.479 Cr. However, APTRANSCO proposed a non tariff

income of Rs.245.46 Cr only for the 3<sup>rd</sup> Control period (Rs.57.50 Cr in 2013-14, Rs.43.64 Cr in 2014-15, Rs.67.52 Cr in 2015-16, Rs.36.44 Cr in 2016-17, Rs.62.60 Cr in 2017-18 and Rs.35.26 Cr in 2018-19).

**Sri MR Prasad of AP Ferro Alloy producers Association and others** submitted that definition of Non-tariff Income itself provides for an exclusion list. Any income earned by the transmission licensee has to be treated as Non tariff Income in terms of the tariff regulations and applied as a reduction to the Aggregate Revenue Requirement. The actual Non-tariff Incomes in FY2010-11 are considerably higher than those projected by APTRANSCO in the third control period. The audited accounts reveal that the actual non tariff incomes were to the tune of Rs.117.51 Cr whereas the projections in the third control period range from Rs.35.26 Cr to Rs.67.52 Cr. No explanations have been provided by APTRANSCO as to why non tariff incomes would drop so significantly. Commission may conduct a strict prudence check and approve such non tariff incomes which are rotatable to the past years.

**Reply of the Licensee:** Non tariff income realized substantially during 2<sup>nd</sup> Control Period is a temporary phenomenon which might not continue in the future. Further, if the Non-Tariff Income exceeds the approved non-tariff income, as per the Tariff Order issued by the APERC, the same will be trued up in the next control period.

The main reasons for increase in the Non-Tariff Income are on account of the accounting adjustments made during the 2nd control period and the details are as follows: (a) Earlier the Training Expenses allocated to DISCOMs was shown in the Expenses Capitalized and the same was deducted from the expenditure. In consonance to the objection/suggestion raised/made by the Statutory Auditors and the C&AG, the recovery of Training expenses from DISCOMs is accounted for as other income instead of reducing from the expenditure head (b) The depreciation on the assets of APTRANSCO is inclusive of the depreciation in respect of GoAP's Lift Irrigation Assets. These assets are created out of the capital contributions received from GOAP. To offset the impact of depreciation of LIS assets to P&L account, the equivalent amount is accounted under Other Income head duly transferring from the Capital Contributions received for

creation of such assets from the FY2010-11 to FY2012-13 to the extent of Rs.59.86 Cr (c) The supervision charges on the Lift Irrigation Schemes were received to the extent of Rs.122.05 Cr from FY 2010-11 to 2012-13 during the 2<sup>nd</sup> control period which were not anticipated/projected while filing the ARR for 2<sup>nd</sup> control period (d) Apart from these, all the elements of Other Income which were received in 2<sup>nd</sup> Control Period are projected/estimated in the 3<sup>rd</sup> Control Period based on the actuals.

**Commission's View:** While the Commission empathizes with the response made by the Licensee. It is of the considered view that despite the issues raised the non Tariff Income has been under projected given the number of irrigation works which still need to be taken up. Accordingly, the Commission partially accepts the views of the objectors and has revised upward the projected non tariff income for the 3<sup>rd</sup> Control Period.

***Determination of Non tariff income:***

58. As projected out above the Commission after carefully through considering the above facts and considering the views/suggestions of the objectors', has revised upwards the non tariff income projected for the third control period tune of Rs.245.46 Cr to Rs.711.27 Cr. The year wise non tariff income filed by the licensee and approved by the Commission is indicated in the below table.

**Table No.6.11 - Year wise Non-tariff income filed and approved,(Rs. Cr)**

Year	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Filed	43.64	67.52	36.44	62.60	35.26	245.46
Approved	128.92	135.28	141.93	148.88	156.26	711.27

***Net Aggregate Revenue Requirement***

59. The gross revenue requirement is the total of Depreciation cost, Return on capital employed, O&M Cost and Taxes on income & other costs less expenses capitalised. And the net Revenue requirement is the difference between the Gross revenue requirement and the non tariff income.
60. The net ARR for APTRANSCO is approved at Rs.12700.32 Cr as against Rs.17257.47 Cr filed by APTRANSCO for the entire Control Period. The details of net ARR filed and approved are given in the Table below.

**Table No.6.12 - Net Aggregate Revenue Requirement,(Rs. Cr.)**

Financial Year	Net ARR	
	Filing	APERC
1	2	3
2014-15	1833.73	1685.46
2015-16	2756.19	2201.37
2016-17	3751.36	2785.44
2017-18	4248.44	3043.07
2018-19	4667.75	3148.98
<b>Total</b>	<b>17257.47</b>	<b>12864.32</b>
<i>Figures are rounded</i>		

## CHAPTER - VII

### TARIFF

#### *Transmission Tariff*

61. The Transmission Tariff Schedule consist of a) Transmission Charge in Rs/MW/Month and b) Transmission Loss percent.
- a) To recover the estimated net ARR, APTRANSCO proposed to levy the monthly Transmission Charge/Rate on total non coincident demand projected for each year added to Open Access capacities treating it as contracted capacities. APTRANSCO computed the Transmission Charge by dividing the net ARR with the proposed total contracted capacity for each year of the control period.
- b) Since the energy drawn by the users from the transmission system is always less than energy injected into system to the extent of transmission losses, APTRANSCO is accountable for energy to the users to the extent of input energy net of transmission losses. APTRANSCO estimated the transmission loss percentage and filed the same for each year of the Control Period.
62. The details of the Transmission Tariff and Transmission Loss Percentage as filed by APTRANSCO are given in Table below:

**Table No.7.1 - FILINGS: Transmission tariff details**

Financial Year	Net Revenue Requirement, Rs. Cr.	Generation Capacity, MW	Transmission Tariff	
			Transmission Charge Rs/kW/Month	Transmission Loss, in (Avg. loss) Percent
1	2	3	4(2/3)	5
2014-15	1833.73	17375	87.95	4.15%
2015-16	2756.19	19393	118.44	4.10%
2016-17	3751.36	21650	144.39	4.05%
2017-18	4248.44	24172	146.47	4.00%
2018-19	4667.75	27012	144.00	3.95%

***Objections/Suggestions regarding Year wise Transmission Tariffs***

63. Sri T Harish Rao MLA, Dr M Thimma Reddy of People's Monitoring Group on Electricity Regulation, Sri K Raghu of Telangana Electricity Employees JAC & Sri Gade Diwakar of All India Kisan Mazdoor Sangh and others submitted that there is a need to fix transmission tariff for one year (2014-15), instead of the five year control period in the background of impending bifurcation of the state of Andhra Pradesh.

**Sri M Venugopala Rao of Center for Power Studies and others** submitted the following: If proposed bifurcation of Andhra Pradesh comes into effect before the next general elections, the tariffs that are going to be determined by the Commission for the year 2014-15 and the third control period, need to be modified taking the changes incorporated in the Act relating to generation and transmission capacities and SLDCs of respective States of Andhra Pradesh and Telangana by asking the successor utilities to file their tariff proposals, etc., afresh, and then issue Tariff Orders separately, holding the public hearings. If the two proposed States come into existence even before the Commission issues its tariff orders, it will have to ask the respective DISCOMs, Transmission Utilities and SLDCs to file their tariff proposals, etc., afresh, hold public hearings and issue separate orders within the stipulated period of six month.

**Reply of the Licensee:** As per APERC Regulation 5 of 2005, every Transmission Licensee has to file ARR for entire Control Period for its transmission business not less than 120 days before the commencement of the Control Period. Hence Transmission Licensee has filed ARR for entire 3<sup>rd</sup> Control Period. However, the issues of fixing transmission tariff for one year is not under the purview of the Licensee.

**Commission's View:** The Commission notes that the Andhra Pradesh State Reorganisation Act, (No.6 of 2014), (herein called the Act) has been gazetted on 01-03-2014. The need for issuing this Tariff order and its relevance after new Commissions are appointed consequent to formation of two states has been discussed at the beginning of this order.

**Objections/Suggestions regarding Refund of Transmission Charges**

64. **Sri Badrinath and others** submitted the following: The Transmission capacity considered by the Commission for the Year 2013-14 was 21222 MW while the TRANSCO's proposed capacity for 2014-15 is only 17375 MW. It is clear that TRANSCO has not achieved the transmission capacity as proposed in the ARR filing of second Control period. Since ARR requirement and the transmission charges were calculated based on the proposed creation of assets (lines, substations etc.), and the O&M expenses adequate to the proposed capacity, the ARR and transmission charges for the second control period were paid to TRANSCO at a rate higher than that actually required. The amounts paid in excess have to be refunded to DISCOMs which in turn should pass on the benefit to the retail consumers.

Transmission cost and the transmission capacity adopted by the commission as per the Tariff Order and the actual transmission cost and the actual capacity are as follows:

Year	2010-11	2011-12	2012-13	2013-14	Total
As per the Tariff Order					
Transmission capacity (MW)	15542	15963	17877	21222	
Transmission cost allowed (Cr)	874.52	1097.51	1405.12	1554.16	
Actuals					
Transmission capacity (MW)	14451.65	14451.65	17375	17375	
Transmission cost allowed (Rs Cr)	874.52	1097.51	1405.12	1554.16	
Transmission cost to be allowed as per the reduced Transmission capacity (MW)	813.17	993.6	1365.66	1272.43	
Excess Transmission cost to be refunded by the TRANSCO (Rs Cr)	61.35	103.91	39.45	281.73	486.44
Interest at the rate allowed to TRANSCO on debt component (10%).	18.40	20.78	3.95	Nil	43.13

65. Thus, TRANSCO has received an amount of Rs 486.44 Cr as transmission charges in excess of actually allowable and hence the same needs to be refunded to

DISCOMs. Further, TRANSCO has also earned interest income of Rs 43.13 Cr on this excess transmission charges.

**Sri M. Venugopala Rao of Center for Power Studies and others** submitted the following: APTRANSCO could not show higher revenue on account of non-implementation of schemes as approved in the tariff order of the Commission for the 2nd control period vis-a-vis higher tariff fixed based on schemes and investments permitted by the Commission for the same period. Against additional revenue of Rs.488 Cr, after adjusting a sum of Rs.250 Cr towards payment of taxes, APTRANSCO has proposed to pass the net surplus of Rs.233 Cr in 2014-15. Despite such pass through, AP Transco has proposed higher transmission tariffs for 2014-15 and the subsequent four years of the 3rd control period ranging from Rs.87.95 to Rs.146.77 per KW per month for various reasons

**Reply of the Licensee:** The reduction in contracted capacity arose because of the change in methodology in calculating contracted capacity. Earlier DISCOMs projected their contracted capacity based on installed capacity and now projected based on non-coincidental peak demand. The contracted capacity 21222 MW shown for the year 2013-14 is installed capacity and 17375 MW shown for the year 2014-15 is non-coincidental peak demand of four DISCOMs. To meet the peak demand of 17375 MW, the installed capacity will be more than 17375 MW and the transmission cost also will be more than for that of 17375 MW. Hence the calculation made by the objector taking two different quantities is not correct. So there is no issue of refund of excess transmission tariff.

This change of methodology has an impact bearing only on transmission tariff but not on the grid or ARR. Because the capital expenditure spent or planned always is based on need to improve existing system and power evacuation schemes.

However, the APTRANSCO has to file its proposal for pass-through as well as sharing of gain/losses on variation in 'uncontrollable' items of ARR and Controllable items (indexed to external parameters) at the end of the control period. Thus, APTRANSCO has filed the Actual Aggregate Revenue



Requirement for each year, computed based on actual investments, actual interest rates , actual costs and Surplus/ (Deficit) for each year, computed based on actual revenue accrued in each year for the period of FY2008-09 to FY 2012-13 along with the ARR for 3<sup>rd</sup> Control period.

By taking above all factors into account, APTRANSCO proposed to pass the surplus of INR 233 Cr for period FY 2008-09 to FY 2012-13 to the Transmission users in the ARR filing for 3<sup>rd</sup> Control Period.

**Commission's View:** The role of Transmission capacity, installed capacity and total contracted capacity has been adequately detailed at para 26. The Commission has adopted installed capacity, as in the past, for determining the tariff. With regard to Control Period true up, this issued has been discussed at para 20. To keep the tariff low Commission has adopted an amount of Rs.61.73 Cr.

***Objections/Suggestions regarding Collection of Transmission Charges from 3<sup>rd</sup> Party Generators***

66. **Sri Badrinath and others** have submitted as follows: Income from transmission charges in respect of third party generators wheeling capacity were not billed and accounted since the matter is sub-judice. The total of income from transmission charges not billed and accounted for is Rs.152.47 Cr up to 2010-11. The same might have crossed Rs 200 Cr by now. It has been 8 years the cases were not finalized. APTRANSCO may clarify on the following issues: (a) what are the reasons for such abnormal delay? (b) At which Court, these cases are pending? APTRANSCO (c) has to publish the details and status of these cases along with case numbers for public to get included in these cases as interested parties since this revenue will have an impact on consumers (d) whether the Company has obtained adequate guarantee (in the form of Bank guarantee etc) from the third party (e) generators? If they closedown the business what is the remedy available to APTRANSCO to recover the same? (f) Whether the Court has passed any directive to the Parties to deposit at least 50% of the bill amount as a measure of security? (g) Did the tax authorities have considered this also as an income for the purpose of calculation of income tax?

**Reply of the Licensee:** (i) For queries (a) & (b): 89 nos. Civil Appeals comprising of two batch cases (1<sup>st</sup> & batch & 2<sup>nd</sup> C.A.No.7029/2008 & batch) filed by APTRANSCO & APDISCOMS against A.P. High Court order dated 18.04.2003 & APTEL order dated 08.05.2008 are pending before Hon'ble Supreme Court in respect of Wheeling Charges. The Apex Court is listing the cases from time to time and is expected to take up the hearing shortly. (ii) For queries (c) & (d): APTRANSCO has already obtained BGs from generators availing Wheeling service and maintaining the same (iii) For queries e: Until the appeals are decided by the Apex Court in favour of Licensees, the proposed income from Wheeling charges cannot be considered as income accrued for the purpose of computation of Income Tax. Batch of 55 nos. appeals from C.A.No. 4569/2003 batch of 34 nos. appeals from Wheeling charges cannot be considered as income accrued for the purpose of computation of Income Tax.

**Commission's View:** The reply furnished is found to be reasonable.

***Objections/Suggestions regarding Fixing of Transmission Charges***

67. **Dr M Thimma Reddy, Sri T Harish Rao & Sri G Diwakar and others** have submitted that Transmission tariff proposals of TRANSCO shows that while total generation capacity to be wheeled is expected to increase by 55% only during the 3rd control period its transmission cost (ARR of Transmission Business) is expected to increase by 155% and transmission charges are also expected to increase. This is particularly puzzling in the presence of single digit of inflation rate. Further, if the projected capacity is not realized and the same transmission expenditure is allowed transmission charges will skyrocket, affecting the consumers adversely

**Sri M Venugopala Rao of Centre for Power Studies** submitted the following: Since transmission capacities required for the second control period were estimated on the basis of estimated or determined generation capacities which ultimately turned out to be inflated, the transmission capacities determined and permitted by the Commission for 2009-10 to 2013-14 must have been higher than what have actually been required during the 2<sup>nd</sup> control period of five years. Since transmission tariffs for the said five-year period were

determined by the Commission based on higher generation capacities and transmission capacities estimated to be required to evacuate quantum of power generated by utilizing that installed capacity, the annual revenue requirements and revenue through transmission tariffs realized by AP Transco also varied.

**Reply of the Licensee:** Due to change in contracted capacity being adopted by the DISCOMs (For the second control period, installed capacity was used while in 3<sup>rd</sup> control period, coincident demand is used), the transmission charges appears to increase little higher than what should have been. Irrespective of contracted capacity method, ARR of transmission licensee remains same and DISCOMs pay the same aggregate amount If contracted capacity is less transmission tariff will be high without any change in ARR.

**Commission's View:** The Commission after thorough scrutiny on the filings made by the Licensee has regulated the ARR to be Rs.12864.32 Cr as against the filed amount of Rs.17257 Cr. In regard to the total contracted capacity the Commission following the practice in the previous Control Periods has adopted the Generation Capacity as Installed Capacity.

***Objections/Suggestions regarding Collection of Short-Term Open Access (STOA) Charges***

68. **Sri Badrinath and others**, referring to the objections filed by them during the public hearing related to FSA for the years 2010-11 and 2011-12, regarding Short Term Open Access (STOA) charges claimed by DISCOMs, have submitted the following: The DISCOMs have claimed an amount of Rs 30, 65,14,777 for 2010-11 and Rs 105,01,91,317 for the year 2011-12. After examining the issue, the Commission disallowed this amount as part of FSA, but not declared that DISCOMs need not pay to TRANSCO. During R&C measures in 2013-14, several industrial consumers have purchased power from sources outside the state / from Power exchanges. Actually, all these consumers are consumers of DISCOMs and DISCOMs have contracted transmission capacity for supplying power to them. However, due to shortage of generation in the State, they procured power from outside. But, despite the fact that DISCOMs have not utilised the contracted transmission capacity in full, TRANSCO has collected

transmission charges for full capacity and also STOA charges for short term power purchases. Further, TRANSCO has also collected Open Access Transmission charges from DISCOM consumers who have purchased power from Outside sources. This amounts to double charging the consumers for single transmission network. For example, Transmission capacity allocated to other Generators- Open Access is 1291 MW in 2013-14. Due to R&C measures TRANSCO has allotted Open Access capacity in excess of this limit. The excess capacity used by TRANSCO actually belongs to DISCOMs. But it will not share any revenue to DISCOMs.

Further, APTRANSCO has projected 1753 MW for Open Access in 2013-14; but, reduced the same to 420 MW to 586 MW in subsequent years. Maximum capacity was allocated to DISCOMs so that revenue will be realized without fail from DISCOMs. Further, the additional revenue that may be realized from allocating capacity in excess of this limit need not be shared with DISCOMs. This will give maximum advantage to TRANSCO at the cost of DISCOMs and retail consumers, Objectors pointed out.

**Sri Narne Prabhakar of M/s Hetero Drugs Pvt Ltd, and others,** during the Public Hearings, submitted to the Commission that SLDC & Transmission charges are being demanded from the Scheduled HT consumers during the Open Access. They pleaded before the commission, they invested a lot of amounts for Wind Power and being the Scheduled HT consumers they need not pay any SLDC & Transmission charges within the contracted load.

**Reply of the Licensee:** Transmission Tariff Order for 2<sup>nd</sup> Control period consists of three heads viz., DISCOMs contracted capacities, open access capacities and third party capacities. The STOA transactions come under open access capacities. Due to the R&C measures there was some excess revenue was realized on capacity over and above 1291 MW as given in tariff order under open access head. But it varies from period to period. The revenue realized is being trued up. Hence request of returning of excess revenue to DISCOMs does not arise. In the open access/third party capacities for FY2013-14 were estimated as per the Tariff Order. But in the next control period, the methodology is changed and DISCOMs need not pay for STOA

transactions and MTOA transactions and they are billed for only their contracted capacity of non-coincidental peak demand. Hence the present OA capacity consists of only energy exchange transactions and other OA transactions not involving DISCOMs. Hence the sudden reduction of open access capacity from 1753 MW for the year 2013-14 to 420MW for the year 2014-15 took place. The figure furnished by objector is including of 3<sup>rd</sup> party and open access generators' Transmission charges. Therefore, the following are the amounts collected towards Transmission charges from STOA.

Year	Amount (Rs. in crores)
2009-10	7.44
2010-11	19.50
2011-12	25.03
2012-13	28.60

**Commission's View:** The Commission is of the view that for the second control period, the total ARR is was recovered from the DISCOMS based on the contracted generating capacity and from OA consumers based on their contracted capacity, approved in the Tariff Order. Any amount recovered over and above the ARR by the AP Transco, from the scheduled consumers (scheduled consumers are those who are the consumers of the DISCOM and availing part of their total contracted demand (CD) with DISCOM, through open access) and from DISCOMS, is an unbudgeted revenue to Transco the since scheduled consumer is paying based on actual recorded demand instead of 80% of CD during R & C period.

During R&C period, the scheduled consumer who has availed Open Access within the contract demand of the DISCOM generally pay the charges towards demand as shown example below:

**A. During R&C Period :**

- a) Contracted Demand with the DISCOMS - 1000 kVA
- b) Permanent Demand Limit (PDL)fixed during R&C period - 600 kVA  
by Discoms (60% of CD)
- c) Open Access (OA) availed - 400 kVA
- Total Contracted Demand (PDL & OA) - 1000 kVA

- d) Recorded Maximum Demand (RMD) - 980 kVA
- (i) OA Demand - 400 kVA
- (ii) DISCOM Demand - 580 kVA
- Total RMD - 980 kVA
- e) The Consumer pays :
- (i) Demand charges only for 580 kVA and not for 800 kVA which is 80% of 1000 kVA (800 kVA) to DISCOM as per Tariff other than R&C period time.
- (ii) In addition to the 580 kVA the consumer will pay OA charges on 400 kVA to APTransco. i.e. with in CD.
- f) From the above the consumer is not incurring any extra amount. The DISCOM has already paid demand charges towards transmission charges as contracted capacity as per Transmission Tariff Order to APTransco for 1000kVA but collected from consumer and consumer is also paying OA charges for 400kVA to APTransco under OA agreement. Thus APTransco is getting additional amount.

**B. During Normal Period:**

- a) Contracted Demand with the DISCOMS - 1000 kVA
- b) Demand availing with DISCOM - 800 kVA
- c) Open Access (OA) availed - 200 kVA
- Total Contracted Demand (DISCOM & OA) - 1000 kVA
- d) Recorded Maximum Demand (RMD) - 980 kVA
- (i) OA Demand - 200 kVA
- (ii) DISCOM Demand - 780 kVA
- Total RMD - 980 kVA
- e) The Consumer pays :
- (i) Demand charges to DISCOMS for 800 kVA (80% of 1000 kVA) but not on 780 kVA to DISCOM as per Tariff Order.
- (ii) In addition to the 800 kVA the consumer will pay OA charges on 200 kVA to APTRANSCO.

f) From the above the consumer is not incurring any extra amount. The DISCOM has already paid demand charges towards transmission charges as contracted capacity as per Transmission Tariff Order to APTRANSCO for 1000kVA and collected from consumer as per entitlement in Tariff Order and consumer is also paying OA charges for 200kVA to APTRANSCO under OA agreement. Thus APTRANSCO will get an additional amount.

**C. Availing OA over and above CD of DISCOM - Total 1500 kVA**

- a) CD with DISCOM - 1000kVA
- b) OA Demand - 500kVA
- c) RMD - 1400 kVA
  - (i) OA Demand - 500 kVA
  - (ii) DISCOM Demand - 900 kVA
- d) Charges paid :
  - (i) DISCOM - 900 kVA (more than 80% of 1000kVA)
  - (ii) APTRANSCO - 500 kVA

Consumer is paying as per his/her entitlement to APTRANSCO. DISCOM get revenue as per Tariff. APTRANSCO in this case will not get any extra amount.

***Transmission Tariff for the Control Period***

69. The Commission computed the Transmission Charge in Rs/kW/Month as per Regulation 5 of 2005 using the approved Net ARR and the approved Contracted capacity for each year of the Control Period. The Transmission Charge computed using the following formulae:

$$\text{Transmission Charge (Rs/kW/Month)} = \text{Net ARR} / (\text{Total Contracted Capacity in kW} \times 12)$$

70. The Commission has determined the Loss trajectory for the 3<sup>rd</sup> Control Period in Chapter V in this order.

71. At the tariff determined by the Commission, APTRANSCO will recover the approved revenue requirement without incurring any financial loss. The details of Transmission Tariff consisting of a) Transmission Charge and b) Transmission Loss (in kind) for each year of the Control Period are given in the Table below:

**Table No.7.2 - Transmission Tariff Schedule, 2014-15 to 2018-19**

Financial Year	Net ARR, (Rs. Cr.)	Generation capacity, MW	Transmission Tariff	
			Transmission Charge/Rate (Rs/kW/Month)	Transmission Loss(kind)
1	2	3	4(3/2)	5
2014-15	1685.46	21509	65.30	4.02%
2015-16	2201.37	23931	76.66	4.02%
2016-17	2785.44	25407	91.36	4.01%
2017-18	3043.07	26589	95.37	3.98%
2018-19	3148.98	27786	94.44	3.95%

**Notes on Transmission Tariff:**

- i) In line with Government Policy there shall be no Transmission Charges for Non-Conventional Energy generators of using Wind, Solar and Mini hydel.
- ii) The users of the transmission system shall pay transmission charge and bear the transmission loss in kind.
- iii) The Transmission charges payable and the energy losses to be borne shall be related to the contracted capacity in kW, at the entry point.
- iv) The other conditions applicable for levy and collection of these charges shall be as per the provisions of the Andhra Pradesh Electricity Regulatory Commission (Terms and conditions of Open Access to Intra-State Transmission and Distribution networks), Regulation, 2005 (No.2 of 2005) and the Balancing and settlement code, in force.

***Commission Intervention in Case of Variations in Cost and Revenues***

72. APTRANSCO should be in a position to recover the approved revenue requirement with the charge fixed by the Commission on annual and cumulative basis for the Control Period. The details are given in the below table

**Table No.7.3 - APERC Approved Cost, Annual and Cumulative Recovery(Rs. Cr.)**

Sl. No.	Net ARR	YEAR					MYT Period
		2014-15	2015-16	2016-17	2017-18	2018-19	
1	Approved	1685.46	2201.37	2785.44	3043.07	3148.98	12864.32
2	Cumulative Recovery	1685.46	3886.83	6672.27	9715.34	12864.32	



73. If the cumulative actual cost is less than 90 percent of cumulative approved cost at the beginning of the financial year starting from 2015-16, the Commission may require the APTRANSCO to explain the reasons for cost variations. If necessary, the Commission may also require APTRANSCO to file the Transmission Tariff for the rest of the Control Period.
74. If the cumulative actual revenue is more than 10 percent of cumulative approved revenue at the beginning of the financial year starting from 2015-16, the Commission may require the APTRANSCO to explain the reasons for revenue variations. If necessary, the Commission may also require APTRANSCO to file the Transmission Tariff for the rest of the control period of five years.
75. If the actual recovery of revenue through Transmission Charge is less than 10 percent of the actual cost, the APTRANSCO may file the details with the Commission seeking the remedy for under recovery of the cost. The Commission, upon examination of these details may pass an appropriate Order or show the ways and means to address issue of the under recovery of the cost.
76. For the purpose of monitoring the actual cost and revenue, the Commission will issue a format for filing of actual cost and revenues. In this context, the Commission directs that:

***APTRANSCO shall file the actual costs and revenues on the last week of quarter every year for the previous quarter in the format prescribed for this purpose by the Commission. APTRANSCO may also state its own observations on cost, revenues and capacities along with the quarterly report.***

77. The Commission noted that APTRANSCO is yet to segregate SLDC assets in its Annual Accounts despite the existence of such requirement. This is necessary in view of different regulatory treatment of assets. The SLDC investments are recovered in full through amortization of capital investment without any return on capital employed. In case of APTRANSCO, investments are recovered through depreciation expenses and the assets get the return on capital employed. APTRANSCO needs to expedite the process of segregation of the SLDC assets. The Commission already issued a directive to APTRANSCO in this matter and reiterates the same in this Order which now providing a dead line.

***APTRANSCO shall segregate the SLDC accounts in full shape within a year, i.e. by end of 31<sup>st</sup> March, 2015, and also immediately start maintaining separate asset registers on prospective basis. These asset registers will be inspected by the Commission Staff from time to time.***

78. The Transmission Charge and Loss in kind fixed for each year of the control period are applicable from 1<sup>st</sup> April to 31<sup>st</sup> March of the respective year. However, for the year FY2014-15 the transmission charges and loss in kind determined are applicable w.e.f. dated:17-05-2014. The Transmission Tariff Schedule is given in Annexure-A and it is applicable as stated in the notes therein. This order is subject to the caveat at Para 1 of this order consequent to the reorganization of the State.

**This Order is signed on the 9<sup>th</sup> day of May 2014.**

**Sd/-  
(P.RAJAGOPAL REDDY)  
MEMBER**

**Sd/-  
(R.ASHOKA CHARI)  
MEMBER**

**Sd/-  
(Dr. V.BHASKAR)  
CHAIRMAN**

## ANNEXURE - A

### TRANSMISSION TARIFF SCHEDULE, 2014-15 TO 2018-19

Year	Transmission Charge (Rs./kW/Month)	Transmission Loss (percent)
2014-15	65.30	4.02
2015-16	76.66	4.02
2016-17	91.36	4.01
2017-18	95.37	3.98
2018-19	94.44	3.95

#### Notes on Transmission Tariff:

1. In line with Government Policy there shall be no Transmission Charges for Non-Conventional Energy generators of using Wind, Solar and Mini hydel.
2. The users of the transmission system shall pay transmission charge and also bear the transmission loss in kind for both energy and capacity as indicated above.
3. The Transmission charges payable and the energy losses to be borne shall be related to the contracted capacity in KW, at the entry point.
4. The other conditions applicable for levy and collection of these charges shall be as per the provisions of the Andhra Pradesh Electricity Regulatory Commission (Terms and conditions of Open Access to Intra-State Transmission and Distribution networks), Regulation, 2005 (No.2 of 2005) and the Balancing and settlement code, in force.
5. The transmission tariff/charges are to be levied as per the terms and conditions approved by the Commission from time to time.

# ANNEXURE-B1

**BEFORE THE HONOURABLE**  
**ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION (APERC)**  
D.No. 11-4-660, 5th Floor, Singareni bhavan, lakdi-ka-pool, Red Hills, HYDERABAD-500004.

1. Notice is hereby given to all that the Transmission Corporation of Andhra Pradesh Limited (APTRANSCO), holding License for Transmission of Electricity (No. 1/2000), has submitted the fillings on the Aggregate Revenue Requirement (ARR) proposals and application for the proposed tariffs for its Transmission Business and SLDC activity for the 3rd control period (FY 2014-15 to FY 2018-19) along with the fillings of Multi Year Tariff Framework as per the APERC Regulation No. 5 of 2005 (Terms & Conditions for Determination of Transmission Tariff) & Regulation No. 1 of 2006 (Levy and collection of charges by State Load Dispatch Center), on 30-11-2013. These fillings are taken on record by the Hon'ble commission in OP No. 62 of 2013 for Transmission Business and OP No. 61 of 2013 for SLDC Activity.

2. Copies of the fillings and application referred to at Para 1 above are available in the Office of the Executive Director (Planning, RAC & Reforms), Room No.149, A-Block, Vidyut Soudha, Khairatabad, Hyderabad-500 082 and also in the offices of the Chief Engineers (TL & SS) located at Visakhapatnam, Vijayawada, Kadapa, Hyderabad & Warangal, in the offices of Superintending Engineers (TL & SS) located at Nalgonda, Karimnagar, Nizamabad, Mahaboobnagar, Sangareddy, Nellore, Rajahmundry and Kurnool and in the offices of Divisional Engineers (TL & SS) located at Boodidampadu, Nirmal, Guntur, Ongole, Garividi, Nidadavolu, Ananthapur & Chittoor. Copies of these fillings can be obtained from the above offices from 04.12.2013 onwards on payment of Rs. 150/- for Transmission fillings and Rs. 50/- for SLDC fillings. Also a summary of ARR and Tariff fillings in English or Telugu can be separately obtained on payment of Rs. 10/-

3. Interested person(s) may inspect/peruse the said ARR and tariff proposals and take note thereof during office hours at any of the said offices at free of charge. These proposals are also available on Websites [www.aptransco.gov.in](http://www.aptransco.gov.in) and [www.aperc.gov.in](http://www.aperc.gov.in).

4. The Charges proposed and summary of Multi-Year-Tariff framework for Transmission business and SLDC activity for the 3rd control period (FY 2014-15 to FY 2018-19) are indicated in the schedule-I & II below.

5. Objections/ Suggestions if any, on the ARR fillings and Tariff/charges proposed by APTRANSCO together with supporting material may be filed with the Commission Secretary, APERC, at the address mentioned above in person or through Registered Post so as to reach him on or before 03.01.2014. A copy of each of the same must also be served on Executive Director (Planning, RAC & Reforms), Room No. 149, A-Block, Vidyut Soudha, Khairatabad, Hyderabad-500 082 in the Head office of the APTRANSCO and proof of service of the same must be enclosed to the filing made to Commission Secretary, APERC. The objections/suggestions should be duly signed and should carry full name, postal address, phone/mobile number and e-mail address of the person(s) sending the objections/suggestions. If the objections/suggestions are filed on behalf of any organization or any category of consumers, it should be so mentioned. If the objector also wants to be heard in person it may also be specifically mentioned so.

6. After perusing the objections/suggestions received in response to this notice the Hon'ble Commission may invite such persons, as it considers appropriate and conduct hearings.

7. Andhra Pradesh Electricity Regulatory Commission intends to conduct a **Public Hearing at Hyderabad on 21.01.2014 (Tuesday) from 10:30 hrs onwards**. The exact venue/location of Public Hearing will be placed in website [www.aperc.gov.in](http://www.aperc.gov.in) one week before its schedule date.

Date: 03-12-2013  
Place: Hyderabad

**CHAIRMAN & MANAGING DIRECTOR**  
APTRANSCO

**SCHEDULE-I**  
**TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED**  
**PROPOSED TARIFF FOR TRANSMISSION BUSINESS OF APTRANSCO FOR 3<sup>rd</sup> CONTROL PERIOD i.e., FY 2014-15 TO FY 2018-19**

Sl.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>A) ARR/ Transmission Charges</b>						
1)	Aggregate Revenue Requirement - Transmission (Rs. Crores)	1834	2756	3751	4248	4668
2)	Contracted Capacity * (MW)	17375	19393	21650	24172	27012
3)	Transmission Charges (Rs. /kW/Month)	87.95	118.44	144.39	146.47	144.00
<b>B) Transmission Loss Reduction Trajectory:</b>						
1)	Transmission Loss (%)	4.15 +/- 0.3	4.10 +/- 0.3	4.05 +/- 0.3	4.00 +/- 0.3	3.95 +/- 0.3
<b>C) Capital Investment</b>						
1)	Capital Investments (in Rs. Crore)	4509	4705	2430	1246	1071

\* Includes demand from the Open Access Consumers

**SCHEDULE-II**  
**TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED**  
**PROPOSED TARIFF FOR SLDC ACTIVITY OF APTRANSCO FOR 3<sup>rd</sup> CONTROL PERIOD i.e., FY 2014-15 TO FY 2018-19**

Sl.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>A) ARR/SLDC Fee</b>						
1)	Aggregate Revenue Requirement (SLDC) (in Rs Crore)	86	101	123	148	176
2)	Generating Capacity (MW)	21760	24132	25553	26675	27782
3)	Operating Charges (Rs. / MW / Month)	2783	2927	3383	3950	4615
4)	Annual Fee (Rs. /MW/Annum)	6199	6721	7389	8069	7804
<b>B) Capital Investment</b>						
1)	Capital Investments (in Rs. Crore)	42.04	15.63	15.24	15.15	0.88

R.O.No. 72/13

# ANNEXURE-B2

**గిరివనీయం ఆంధ్రప్రదేశ్ ఎలక్ట్రిసిటీ రెగ్యులేటరీ కమిషన్ (APERC) సమక్షములో**  
ఇంటి నెం. 11-4-660, 5వ అంతస్తు, సింగరేణి భవన్, లక్ష్మీకృపూర్, రెడ్ హిల్స్, హైదరాబాద్-500004.

## బహిరంగ ప్రకటన

- ఇంటిముఖముగా యావత్పండికి తెలియజేయునది ఏమనగా విద్యుత్ సరఫరా నిమిత్తం లైసెన్స్ (నెం. 1/2000) కలిగియున్న రాష్ట్ర ప్రభుత్వ సంస్థ, ట్రాన్సిమిషన్ కార్పొరేషన్ ఆఫ్ ఆంధ్రప్రదేశ్ (ఎ.పి. ట్రాన్సికో) మూడవ నియంత్రణ కాలానికి అనగా 2014-15 నుండి 2018-19 ఆర్థిక సంవత్సరములకుగాను సమగ్ర ఆదాయ ఆవశ్యకత సమాచారాన్ని (ఎ.ఆర్.ఆర్.) టారిఫ్ ప్రతిపాదనలను మరియు ఇతర వార్షిక టారిఫ్ వివరాల పరిధులలో కూడిన విద్యుత్ సరఫరా వ్యాపారము మరియు రాష్ట్ర లోడ్ డిమాండ్ కేంద్ర సర్దుబాటు నిమిత్తం వార్షిక ఆస్తులను కేవలం దరఖాస్తును ఎ.పి.ఐ.ఆర్.సి. టారిఫ్ కమిషన్ రెగ్యులేషన్ నెం. 6/2005 (విద్యుత్ సరఫరా వార్షిక నిర్ణయాల్ని పరీక్షించు మరియు నిబంధనలు) మరియు రెగ్యులేషన్ నెం. 1/2006 (ఎన్.ఎల్.డి.సి. కారకు వార్షిక యజమాను మరియు వార్షిక వసూలు నిమిత్తం) నియమాలు అనుసరించి 30-11-2013 తేదీన ఎ.పి.ఐ.ఆర్.సి. వారికి సమర్పించడమైనది. ఈ సైలింగ్ను గౌరవనీయులైన కమిషన్ వారికి ఓ.సి. నెం. 82/2013 (ట్రాన్సిమిషన్ రిజిస్ట్రేషన్) మరియు నెం. 61/2013 (ఎన్.ఎల్.డి.సి. ఛార్జీలు) క్రింద సమాచారం చేయబడినది.
- పైన 1వ పేరాలో తెలిపిన దరఖాస్తు మరియు సైలింగ్ కారణాలు ఎగ్జిక్యూటివ్ రైజిస్ట్రార్ (Planning, RAC & Reforms) వారి కార్యాలయం, యాం. నెం. 149, ఎ-బ్లాక్, విద్యుత్ శాస్త్ర, ప్రైవేటైజేషన్, హైదరాబాద్-500082 వంతు మరియు విశాఖపట్నం, విజయవాడ, కడప, హైదరాబాద్, వరంగల్ లోని డిఫ్ ఇంజనీర్స్ (TL & SS) వారి కార్యాలయాలలో మరియు నల్గొండ, కరీంనగర్, సిజిఎల్, నెల్లూరు, రాజమండ్రి, కర్నూలు, మహబూబ్ నగర్, నంద్యాలలోని సూపరింటెండింగ్ ఇంజనీర్స్ (TL & SS) వారి కార్యాలయాలలో మరియు బాధిదంపతులు, నిర్దేశ, గుంటూరు, ఒంగోలు, గిరివిడి, నిడదవోలు, అనంతపూర్, దిత్తూరులలోని డివిజన్ ఇంజనీర్స్ (TL & SS) వారి కార్యాలయాలలో ట్రాన్సికో సైలింగ్ కారకు యా. 150/- మరియు ఎన్.ఎల్.డి.సి. సైలింగ్ కారకు యా. 50/- చెల్లించి, పైన తెలిపిన కార్యాలయాల నుండి ఈ సైలింగ్ ప్రతులను 04 డిసెంబర్, 2013 నుండి పొందవచ్చును. టారిఫ్ సైలింగ్ మరియు ఎ.ఆర్.ఆర్. యొక్క సంగ్రహాన్ని కూడా ఇంగ్లీష్ లేదా తెలుగు భాషలలో వెబ్సైటుగా ట్రాన్సికో ద్వారా యా. 10/- చెల్లించి పొందవచ్చును.
- అనేక గల వ్యక్తులు ఏదేని పైన తెలిపిన కార్యాలయాలలో, కార్యాలయవేళ్ళలో ఉదితంగా పైన తెలిపిన ఎ.ఆర్.ఆర్. మరియు టారిఫ్ ప్రతిపాదనలను తనిఖీ/పరిశీలించి మరియు అవసరమైన సమాచారాన్ని పోల్ చేసుకోవచ్చును. ఈ ప్రతిపాదనలు ఎలక్ట్రానిక్ వెబ్సైట్ [www.aperc.gov.in](http://www.aperc.gov.in) నందు మరియు గౌ. రెగ్యులేటరీ కమిషన్ వెబ్సైట్ [www.aperc.gov.in](http://www.aperc.gov.in) నందు కూడా లభ్యమగును.
- ట్రాన్సిమిషన్ రిజిస్ట్రార్ మరియు ఎన్.ఎల్.డి.సి. యాజ్ఞానితీ నిమిత్తం మూడవ నియంత్రణ కాలానికి అనగా 2014-15 నుండి 2018-19 ఆర్థిక సంవత్సరములకుగాను ప్రతిపాదనలకు సంబంధించి వార్షిక మరియు మంత్రి ఇయర్ (సైవి పబ్లిక్ యెక్జిక్యూటివ్) కి 11లో సూచించబడినది.
- ఎ.పి.ట్రాన్సికో ప్రతిపాదించబడిన టారిఫ్/వార్షిక అక్షేపాలు/సూచనలు ఏమైనా ఉన్నట్లైతే వాటికి మద్దతు మరియు మెటీరియల్ను జతపరిచి, సెక్రటరీ, ఎ.పి.ఐ.ఆర్.సి. వారికి పైన పేర్కొన్న విషయాలు స్వయంగా లేదా రిజిస్ట్రార్ ద్వారా 03 జనవరి 2014న లేదా అలాగే వారికి చేరునట్లు దాఖలు చేయవచ్చును. సవరణ అభ్యంతరాల ప్రతులను ఎ.పి.ట్రాన్సికో యొక్క కార్పొరేట్ ఆఫీసులోని ఎగ్జిక్యూటివ్ రైజిస్ట్రార్ (Planning, RAC & Reforms) వారి కార్యాలయం, యాం. నెం. 149, ఎ-బ్లాక్, విద్యుత్ శాస్త్ర, ప్రైవేటైజేషన్, హైదరాబాద్-500082 వంతు పంపుతూ, అట్లు పంపిన రుణాభ్యంతరాలు సెక్రటరీ, ఎ.పి.ఐ.ఆర్.సి. వారికి పంపించిన అభ్యంతరాలకు జతచేయవలెను. అక్షేపాలు/సూచనలపై తన వివరాల సంతకం చేసి, అక్షేపాలు/సూచనలను పంపే వ్యక్తి (వ్యక్తుల) యొక్క పూర్తి పేరు, తపాలా చిరునామా, మొబైల్ ఫోన్ నెంబరు మరియు ఇ-మెయిల్ ఐడీ తప్పనిసరిగా పేర్కొనవలెను. అక్షేపాలదారు, స్వయంగా ఎవరైనా హాజరుకాలేదులకు పుష్టియితే, ఆ విషయాన్ని కూడా స్పష్టంగా పేర్కొనవలెను.
- ఈ ప్రకటనకు ప్రతిస్పందనగా ఉండిన అక్షేపాలు/సూచనలను పరిశీలించిన అనంతరం, గౌరవనీయ కమిషన్, తగినపని భావించిన పక్షంలో వాటి తాలూకా వ్యక్తులను ఆహ్వానించి, విచారణలను నిర్వహిస్తుంది.

ప్రతి అభ్యంతరం కోసం ఆంధ్రప్రదేశ్ ఎలక్ట్రిసిటీ రెగ్యులేటరీ కమిషన్, తేదీ 21.01.2014 (మంగళవారం) ఊ. 10.30 గంటలకు సవరణ పేర్కొంటున్న ప్రతిపాదనలు, ఖచ్చితమైన పేజీ/ప్రాంగణం ప్రతి అభ్యంతరం వెబ్సైట్ [www.aperc.gov.in](http://www.aperc.gov.in) లో నిర్ణయించిన తేదీకి వారం రోజుల ముందుగా పుంజుకం జరుగుతుంది.  
తేదీ: 03-12-2013  
స్థలం: హైదరాబాద్  
రైజిస్ట్రార్ & మేనేజింగ్ రైజిస్ట్రార్  
ఎ.పి. ట్రాన్సికో

### షెడ్యూలు-1

#### ట్రాన్సిమిషన్ కార్పొరేషన్ ఆఫ్ ఆంధ్రప్రదేశ్ లిమిటెడ్

2014-15 నుండి 2018-19 సంవత్సరముల కొరకు ఎ.పి. ట్రాన్సికో యొక్క ట్రాన్సిమిషన్ ఇంజనీర్ లిమిటెడ్ ప్రతిపాదన టారిఫ్

క్ర.సం.	వివరాలు	2014-15	2015-16	2016-17	2017-18	2018-19
<b>A) ఎ.ఆర్.ఆర్. / ట్రాన్సిమిషన్ ఛార్జీలు</b>						
1)	ఎగ్జిగ్జిట్ రెవెన్యూ లైసెన్స్ - ట్రాన్సిమిషన్ (యా. టోక్సలో)	1834	2756	3751	4248	4668
2)	ఉత్పాదన సామర్థ్యం * (MW)	17375	19393	21650	24172	27012
3)	ట్రాన్సిమిషన్ ఛార్జీలు (యా. /KW/నెలకు)	67.95	118.44	144.39	146.47	144.00
<b>B) ట్రాన్సిమిషన్ లాన్ లెవెల్స్ ట్రాన్సిమిషన్:</b>						
1)	ట్రాన్సిమిషన్ సర్క్యూలు (%)	4.15	4.10	4.05	4.00	3.95
		+/- 0.3	+/- 0.3	+/- 0.3	+/- 0.3	+/- 0.3
<b>C) మూలధన పెట్టుబడులు</b>						
1)	మూలధన పెట్టుబడులు (యా. టోక్సలో)	4509	4705	2430	1246	1071

\* పైన పేర్కొన్న ఉత్పాదన సామర్థ్యంలో ఓపిస్ యాక్టివ్ విషయాలు గానూ డిమాండ్ కు వ్యర్థం జరిగింది.

### షెడ్యూలు-2

#### ట్రాన్సిమిషన్ కార్పొరేషన్ ఆఫ్ ఆంధ్రప్రదేశ్ లిమిటెడ్

2014-15 నుండి 2018-19 సంవత్సరముల కొరకు ఎ.పి. ట్రాన్సికో యొక్క ఎన్.ఎల్.డి.సి. యాజ్ఞానితీ కొరకు ప్రతిపాదన టారిఫ్

క్ర.సం.	వివరాలు	2014-15	2015-16	2016-17	2017-18	2018-19
<b>A) ఎ.ఆర్.ఆర్./ఎన్.ఎల్.డి.సి. ఛార్జీలు</b>						
1)	ఎగ్జిగ్జిట్ రెవెన్యూ లైసెన్స్ - ఎన్.ఎల్.డి.సి (యా. టోక్సలో)	86	101	123	148	176
2)	ఉత్పాదన సామర్థ్యం (MW)	21760	24132	25553	26675	27782
3)	అవరేజీ ఛార్జీలు (యా. /MW / నెలకు)	2783	2927	3383	3950	4615
4)	వార్షిక ఫీజు (యా. /MW / సంవత్సరానికి)	6199	6721	7389	8069	7804
<b>B) మూలధన పెట్టుబడులు</b>						
1)	మూలధన పెట్టుబడులు (యా. టోక్సలో)	42.04	15.63	15.24	15.15	0.89

ఆర్.కె. నెం. 72/13

4/12/13  
Andhra Pradesh  
Narasimha Theborgua

## ANNEXURE-B3

### LIST OF REGISTERED OBJECTORS

SL. NO.	NAME & ADDRESS OF THE OBJECTOR
1	Sri M.Venugopala Rao, Convener, Centre for Power Studies, H.No.7-1-408 to 413, F 203, Sri Sai Darsan Residency, Balkampet Road, Ameerpet, Hyderabad 500 016. Phone No.:(040)23737404 Mobile No.9441193749 email address:vrmmummareddi@gmail.com
2	Sri K.Raghu, Coordinator, Telangana Electricity Employees Joint Action Committee (TEEJAC), 204, SCK Residency, Opp. Niloufer Hospital, Lakdi-ka-pul, Hyderabad 500 004.
3	Sri T.Harish Rao, MLA Siddipet Constituency-33, Medak District. Phone No.:(040)23114847 Fax No.(040)23115358, (08457)222222
4	Sri M.Thimma Reddy, Convenor, People's Monitoring Group in Electricity Regulation, 304, GKR Mansion, Church Road, Lakdi-ka-pul, Hyderabad 500 004.
5	Sri G.Diwakar, General Secretary, All India Kisan Mazdoor Sabha (AIKMS), 658, Marxs Bhavan, 7 <sup>th</sup> lane, Vidyanagar, Hyderabad 500 044. Phone No.:(040)27607884 Mobile No.9490700943 Fax No.(040)27662518
6	Sri Ch.Venugopala Rao, Federation of Farmers Associations, H.No.1-191, Railway Wagon Work Shop Road, Guntupalli, Ibrahimpatnam (M), Krishna Dist. 521 241. Phone No.:(0866)2831298 Mobile No.9490206969
7	Sri M.Badrinath, Flat No.102, Harika Enclave, Warasiguda, Secunderabad. Mobile No.9849465085
8	Sri M.R.Prasad, Secretary General, A.P. Ferro Alloys Producers Association, Flat No.308, Nirmal Towers, Dwarakapuri Colony, Punjagutta, Hyderabad 500 082. Phone No.:(040)23355336 Fax No.(040)23355337 email address:apfapa@rediffmail.com

**List of stakeholders who attended the Public Hearing on 21.01.2014 and submitted their objections/suggestions/comments on filings of APTRANSCO**

SL. NO.	NAME & ADDRESS OF THE OBJECTOR
1	Sri Y.V.Subba Rao, Managing Director, M/s RPP Ltd., H.No.1-B, Arora Colony, Road No.3, Banjara Hills, Hyderabad 500 034. Phone Nos.:(040)23544139, 23542109 Fax No.:(040)23540793 email address:info@rppgroup.co.in
2	Sri V.Anil Reddy, Vice President, The Federation of A.P. Chambers of Commerce & Industry, Federation House, FAPCCI Marg, Red Hills, Hyderabad 500 004. Phone Nos.:(040)23395515 to 22 Fax No.:(040)23395525 email address <a href="mailto:sujata@fapcc.in">sujata@fapcc.in</a> info@fapcci.in
3	Sri R.Shiv Kumar, Andhra Pradesh Spinning Mills Association, 05, 1 <sup>st</sup> Floor, Surya Towers, Sardar Patel Road, Secunderabad 500 003. Phone No.:(040)27890041 Mobile No.9849028556 Fax No.:(040)27846837 email address:contact@apspin.com
4	Sri J.Nageswara Rao, President, Federation of Andhra Pradesh Small Industries Association, Administration Building, Industrial Estate, Sanathnagar, Hyderabad 500 018. Phone No.:(040)23812525 Fax No.:(040)23707461 email address:fapsia@gmail.com

## ANNEXURE - C

### LIST OF DIRECTIVES

1. APTRANSCO shall put up a transparent energy accounting system based on boundary meter readings to arrive at monthly energy losses in the transmission system and seek the approval of the Commission for such measurement mechanism. Upon approval of the Commission, APTRANSCO shall use such accounting mechanism to settle the transmission losses to user accounts on actual basis. Till such time, APTRANSCO shall apply only the average transmission losses approved in this Order for energy settlement.
2. APTRANSCO shall file a comparative statement with the Commission on completion of Annual Accounts on depreciation amount calculated following the regulatory principles as stated in Regulation 5 of 2005 and as per approved Statutory Annual Accounts with possibly from the beginning of first control period onwards without fail, by September, 30<sup>th</sup>.
3. APTRANSCO shall file the actual costs and revenues by 25<sup>th</sup> of every month for the previous month in the format prescribed for this purpose by the Commission. APTRANSCO may also state its own observations on cost, revenues and capacities along with the monthly report.
4. APTRANSCO shall segregate the SLDC accounts in full shape within a year, i.e. by end of 31<sup>st</sup> March, 2015, and also immediately start maintaining separate asset registers on prospective basis. These asset registers will be inspected by the Commission Staff from time to time.
5. While awarding contracts, AP Transco is directed to adopt the practice and procedures followed by renewed organizations like Power Grid to have a transparent contract system.
6. Timely Completion of Projects/Schemes: The Licensee shall take all possible measures to ensure that the projects /Schemes taken up are completed as per schedule. In this regard, the Commission clarifies that it will not allow any interest during construction for delays exceeding one month and three months in respect of completion of projects/schemes with the completion schedules of



up to one year and more than one year, respectively, unless the Commission's approval for extension in the completion schedule is obtained in advance.

7. Capital investments: Considering the importance of capitalization of works, the Commission lays down the following requirements to be fulfilled before accepting inclusion of the value of the capitalized work in the OCFA:
  - a) on completion of a capital work, a physical completion certificate (PCC) to the effect that the work in question has been fully executed, physically, and the assets created are put in use, to be issued by the concerned engineer not below the rank of Superintendent Engineer.
  - b) The PCC shall be accompanied or followed by a financial completion certificate (FCC) to the effect that the assets created have been duly entered in the fixed assets register by transfer from the CWIP register to OCFA. The FCC shall have to be issued by the concerned finance officer not below the rank of senior Accounts Officer.
  - c) The above mentioned certificates have to be submitted to the Commission within 60 days of completion of work, at the latest.

The Commission may also inspect or arrange to inspect, at random, a few of the capitalized works included in the OCFA to confirm that the assets created are actually being used and are useful for the business.

## ANNEXURE - D(i)

### APPROVED CONTRACTED CAPACITIES FOR THIRD CONTROL PERIOD IN MW

Generating Station/Source	APERC				
	2014-15	2015-16	2016-17	2017-18	2018-19
VTPS I	383.25	383.25	383.25	383.25	383.25
VTPS II	383.25	383.25	383.25	383.25	383.25
VTPS III	383.25	383.25	383.25	383.25	383.25
VTPS IV	462..50	462..50	462..50	462..50	462..50
RTPP I	382.20	382.20	382.20	382.20	382.20
RTPP II	382.20	382.20	382.20	382.20	382.20
RTPP III	191.63	191.63	191.63	191.63	191.63
KTPS A	216.72	216.72	216.72	216.72	216.72
KTPS B	216.72	216.72	216.72	216.72	216.72
KTPS C	216.72	216.72	216.72	216.72	216.72
KTPS D	455.00	455.00	455.00	455.00	455.00
KTPS VI	462.50	462.50	462.50	462.50	462.50
RTS B	56.88	56.88	56.88	56.88	56.88
KTPP I	462.50	462.50	462.50	462.50	462.50
KTPP II	555.00	555.00	555.00	555.00	555.00
DSTPP I	748.00	748.00	748.00	748.00	748.00
DSTPP II	748.00	748.00	748.00	748.00	748.00
RTPP IV	546.00	546.00	546.00	546.00	546.00
Ramagundam C	-	-	-	600.60	600.60
KTPP III	-	-	-	-	740.00
<b>Total Thermal</b>	<b>7252.31</b>	<b>7252.31</b>	<b>7252.31</b>	<b>7852.91</b>	<b>8592.91</b>
Machkund PH AP Share	83.16	83.16	83.16	83.16	83.16
Tungabhadra PH AP Share	57.02	57.02	57.02	57.02	57.02
USL	237.60	237.60	237.60	237.60	237.60
LSR	455.40	455.40	455.40	455.40	455.40
Donkarayi	24.75	24.75	24.75	24.75	24.75
SSLM	762.30	762.30	762.30	762.30	762.30
SSLM LCPH	891	891	891	891	891
NSPH	807.44	807.44	807.44	807.44	807.44
NSRCPH	89.10	89.10	89.10	89.10	89.10
NSLCPH	59.40	59.40	59.40	59.40	59.40
Pochampad PH	26.73	26.73	26.73	26.73	26.73

Generating Station/Source	APERC				
	2014-15	2015-16	2016-17	2017-18	2018-19
Nizamsagar PH	9.90	9.90	9.90	9.90	9.90
PABM	19.80	19.80	19.80	19.80	19.80
Singur	14.85	14.85	14.85	14.85	14.85
Mini Hydro & Others	12.04	12.04	12.04	12.04	12.04
Priyadarshini Jurala HES	231.66	231.66	231.66	231.66	231.66
Pochampad II	8.91	8.91	8.91	8.91	8.91
Nagarjuna Sagar Tail Pond	49.50	49.50	49.50	49.50	49.50
Lower Jurala HE	237.60	237.60	237.60	237.60	237.60
Pulichintala	-	118.80	118.80	118.80	118.80
<b>Total Hydro</b>	<b>4078.17</b>	<b>4196.97</b>	<b>4196.97</b>	<b>4196.97</b>	<b>4196.97</b>
<b>Total APGenco</b>	<b>11330</b>	<b>11449</b>	<b>11449</b>	<b>12050</b>	<b>12790</b>
NTPC(SR)	629.78	629.78	629.78	629.78	629.78
Ramagundam U1- U6	629.78	629.78	629.78	629.78	629.78
NTPC (SR) Ramagundam -U7	158.58	158.58	158.58	158.58	158.58
NLC TS-II Stage-I	103.93	103.93	103.93	103.93	103.93
NLC TS-II Stage-II	183.93	183.93	183.93	183.93	183.93
NPC-MAPS	38.99	38.99	38.99	38.99	38.99
Talcher Stage 2	374.00	374.00	374.00	374.00	374.00
NTPC- Simhadri Stage I	940.00	940.00	940.00	940.00	940.00
NTPC- Simhadri Stage II	432.49	432.49	432.49	432.49	432.49
Kaiga (Nuclear) Plant I&II	121.37	121.37	121.37	121.37	121.37
Kaiga (Nuclear) Plant III&IV	128.54	128.54	128.54	128.54	128.54
Vallur Thermal Power Plant	206.87	206.87	206.87	206.87	206.87
Kalpakkam	116.16	116.16	116.16	116.16	116.16
Tutricorn	234.23	234.23	234.23	234.23	234.23
Kudigi I&II	-	-	703.12	703.12	703.12
Neyveli	-	-	-	104.60	104.60
<b>Total Central Sector</b>	<b>3668.87</b>	<b>3668.87</b>	<b>4371.99</b>	<b>4476.60</b>	<b>4476.60</b>
APGPCL-I	15.60	15.60	15.60	15.60	15.60
APGPCL-I	41.72	41.72	41.72	41.72	41.72
<b>Total Joint Sector</b>	<b>57.32</b>	<b>57.32</b>	<b>57.32</b>	<b>57.32</b>	<b>57.32</b>
GVK	209.52	209.52	209.52	209.52	209.52

Generating Station/Source	APERC				
	2014-15	2015-16	2016-17	2017-18	2018-19
Spectrum	198.85	198.85	198.85	198.85	198.85
Kondapalli	351.06	351.06	351.06	351.06	351.06
BSES	213.40	213.40	213.40	213.40	213.40
GVK Extension	213.40	213.40	213.40	213.40	213.40
Vemagiri	358.90	358.90	358.90	358.90	358.90
Gowthami	450.08	450.08	450.08	450.08	450.08
Konaseema	430.76	430.76	430.76	430.76	430.76
<b>Total IPPs</b>	<b>2425.97</b>	<b>2425.97</b>	<b>2425.97</b>	<b>2425.97</b>	<b>2425.97</b>
Bagasee	278.80	278.80	278.80	278.80	278.80
Biomass Power	248.00	248.00	248.00	248.00	248.00
Mini Hydel	105.64	105.64	119.64	133.64	147.64
Wind	1064.09	1564.09	2064.09	2264.09	2414.09
Waste Head	30.16	31.16	32.16	33.16	34.16
Municipal /Industrial waste	26.60	28.60	30.60	32.60	34.60
Solar	361.04	561.04	761.04	961.04	1161.04
<b>Total Non-Conventional</b>	<b>2114.33</b>	<b>2817.33</b>	<b>3534.33</b>	<b>3951.33</b>	<b>4318.33</b>
Sri Vatsa Power Projects Limited	16.51	16.51	16.51	16.51	16.51
LVS Power Limited	35.33	35.33	35.33	35.33	35.33
<b>Total MPPS</b>	<b>51.84</b>	<b>51.84</b>	<b>51.84</b>	<b>51.84</b>	<b>51.84</b>
Hinduja	1040	1040	1040	1040	1040
KSK Mahanadi	400	400	400	400	400
Singareni	-	1050	1050	1050	1050
Thermal Power Tech	-	500	500	500	500
<b>Total Others</b>	<b>1440</b>	<b>2990</b>	<b>2990</b>	<b>2990</b>	<b>2990</b>
Open Access / Third Party Sales	420	470	526	586	675
<b>Grand Total</b>	<b>21509</b>	<b>23931</b>	<b>25407</b>	<b>26589</b>	<b>27786</b>

## ANNEXURE - D(ii)

### CONTRACTED CAPACITIES FOR THIRD CONTROL PERIOD

2014-15 TO 2018-19, MW

Year / DISCOMS		2014-15	2015-16	2016-17	2017-18	2018-19
APCPDCL	Filed	6865	7659	8544	9533	10636
	Approved	9714	10806	11460	11977	12487
AEPDCL	Filed	3027	3339	3686	4070	4493
	Approved	3332	3707	3931	4108	4284
APNPDCL	Filed	2628	2891	3180	3498	3848
	Approved	3347	3723	3949	4127	4303
APSPDCL	Filed	4435	5034	5714	6485	7360
	Approved	4697	5225	5541	5791	6038
Open Access / Third Party	Filed	420	470	526	586	675
	Approved	420	470	526	586	675
Total	Filed	<b>17375</b>	<b>19393</b>	<b>21650</b>	<b>24172</b>	<b>27012</b>
	Approved	<b>21509</b>	<b>23931</b>	<b>25407</b>	<b>26589</b>	<b>27786</b>

## ANNEXURE - E

### REGULATED RATE BASE AND RETURN ON CAPITAL EMPLOYED, Rs. Cr.

	Details	APTRANSCO					APERC				
		2014-15	2015-16	2016-17	2017-18	2018-19	2014-15	2015-16	2016-17	2017-18	2018-19
<b>1.0</b>	<b>Assets (1.1. +1.2)</b>	<b>13935.09</b>	<b>20212.75</b>	<b>23310.31</b>	<b>26102.27</b>	<b>28227.57</b>	<b>13604.08</b>	<b>17963.47</b>	<b>20149.04</b>	<b>21655.87</b>	<b>23134.36</b>
1.1	Opening balance of OCFA	11438.55	13935.09	20212.75	23310.31	26102.27	11438.55	13604.08	17963.47	20149.04	21655.87
1.2	Additions during the year	2496.54	6277.67	3097.56	2791.96	2125.30	2165.53	4359.39	2185.57	1506.84	1478.69
<b>2.0</b>	<b>Depreciation (2.1+2.2)</b>	<b>4827.42</b>	<b>5535.70</b>	<b>6603.03</b>	<b>7847.44</b>	<b>9194.23</b>	<b>5016.87</b>	<b>5703.45</b>	<b>6622.02</b>	<b>7657.28</b>	<b>8703.68</b>
2.1	Opening balance	4267.19	4827.42	5535.70	6603.03	7847.44	4456.65	5016.87	5703.45	6622.02	7657.28
2.2	Depreciation during the Year	560.22	708.29	1067.32	1244.41	1346.79	560.22	686.59	918.56	1035.26	1046.40
<b>3.0</b>	<b>Consumer Contributions (3.1+3.2)</b>	<b>2062.53</b>	<b>2450.26</b>	<b>2763.90</b>	<b>2892.80</b>	<b>2994.30</b>	<b>2062.54</b>	<b>2450.27</b>	<b>2763.90</b>	<b>2892.81</b>	<b>2994.30</b>
3.1	Opening balance	1509.36	2062.53	2450.26	2763.90	2892.80	1509.36	2062.54	2450.27	2763.90	2892.81
3.2	Additions during the year	553.18	387.73	313.64	128.91	101.50	553.18	387.73	313.64	128.91	101.50
<b>4.0</b>	<b>Working Capital</b>	<b>100.39</b>	<b>114.96</b>	<b>131.47</b>	<b>149.21</b>	<b>169.09</b>	<b>80.91</b>	<b>88.15</b>	<b>96.11</b>	<b>104.24</b>	<b>113.19</b>
4.1	O&M (45 days Net O&M Expenses)	100.39	114.96	131.47	149.21	169.09	80.91	88.15	96.11	104.24	113.19
4.2	O&M Stores Inventory	-	-	-	-	-	-	-	-	-	-
<b>5.0</b>	<b>Change in Rate Base ((1.2-2.2-3.2)/2)</b>	<b>691.57</b>	<b>2590.82</b>	<b>858.30</b>	<b>709.32</b>	<b>338.51</b>	<b>526.06</b>	<b>1642.54</b>	<b>476.69</b>	<b>171.33</b>	<b>165.40</b>
<b>6.0</b>	<b>Regulated Rate Base(1.1-2.1-3.1+4+5)</b>	<b>6453.96</b>	<b>9750.92</b>	<b>13216.56</b>	<b>14801.91</b>	<b>15869.62</b>	<b>6079.51</b>	<b>8255.36</b>	<b>10382.55</b>	<b>11038.69</b>	<b>11384.37</b>
<b>7.0</b>	<b>Capital Structure</b>										
7.1	Debt, (percent)	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
7.2	Equity, (percent)	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
<b>8.0</b>	<b>Cost of Funds (percent)</b>										
8.1	Cost of Debt, (percent)	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
8.2	Return on Equity, (percent)	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
<b>9.0</b>	<b>*WACC ((7.1 X 8.1)+(7.2 X 8.2))</b>	<b>12.5</b>	<b>12.5</b>	<b>12.5</b>	<b>12.5</b>	<b>12.5</b>	<b>12.5</b>	<b>12.5</b>	<b>12.5</b>	<b>12.5</b>	<b>12.5</b>
<b>10.0</b>	<b>Return on Capital Employed, (6X 9)</b>	<b>806.75</b>	<b>1218.87</b>	<b>1652.07</b>	<b>1850.24</b>	<b>1983.70</b>	<b>759.94</b>	<b>1031.92</b>	<b>1297.82</b>	<b>1379.84</b>	<b>1423.05</b>

**ANNEXURE - F****TRANSMISSION CHARGE/RATE AS FILED BY APTRANSCO, (Rs. Cr.)**

S.No	Details	APTRANSCO				
		2014-15	2015-16	2016-17	2017-18	2018-19
1	<b>Expenditure (2 to 7)</b>	<b>1246.70</b>	<b>1796.87</b>	<b>2308.20</b>	<b>2631.83</b>	<b>2905.99</b>
2	Operation & Maintenance Cost	803.79	913.55	1003.64	1121.72	1274.35
3	O&M Carrying Costs	-	-	-	-	-
4	Depreciation	560.22	708.29	1067.32	1244.41	1346.79
5	Advance Against Depreciation	-	-	-	-	-
6	Income Tax	115.85	175.03	237.24	265.70	284.86
7	Special Appropriation	-233.16	-	-	-	-
11	<b>Expenses Capitalized (12 &amp; 13)</b>	<b>176.07</b>	<b>192.02</b>	<b>172.48</b>	<b>171.03</b>	<b>186.69</b>
12	IDC Capitalized	-	-	-	-	-
13	O&M Expenses Capitalized	176.07	192.02	172.48	171.03	186.69
14	<b>Net Expenditure (1 - 11)</b>	<b>1070.63</b>	<b>1604.85</b>	<b>2135.73</b>	<b>2460.80</b>	<b>2719.30</b>
15	Return on Capital Employed	806.75	1218.87	1652.07	1850.24	1983.70
16	Non Tariff Income	43.64	67.52	36.44	62.60	35.26
17	<b>Net Revenue Requirement (14+15-16)</b>	<b>1833.73</b>	<b>2756.19</b>	<b>3751.36</b>	<b>4248.44</b>	<b>4667.75</b>
18	<b>Tariff &amp; Revenue (Rs/KW/Month)</b>	<b>87.95</b>	<b>118.44</b>	<b>144.39</b>	<b>146.47</b>	<b>144.00</b>
19	<b>Capacity (MW)</b>	<b>17375</b>	<b>19393</b>	<b>21650</b>	<b>24172</b>	<b>27012</b>
	CPDCL	6865	7659	8544	9533	10636
	EPDCL	3027	3339	3686	4070	4493
	NPDCCL	2628	2891	3180	3498	3848
	SPDCL	4435	5034	5714	6485	7360
	<i>Others (3rd Party &amp; Open Access)</i>	420.00	470.00	526.00	586.00	675.00

**ANNEXURE - G****TRANSMISSION CHARGE/RATE, COMMISSION'S CALCULATIONS (Rs. Cr.)**

S.No	Details	APERC				
		2014-15	2015-16	2016-17	2017-18	2018-19
<b>1</b>	<b>Expenditure (2 to 7)</b>	<b>1207.54</b>	<b>1473.26</b>	<b>1788.26</b>	<b>1976.63</b>	<b>2063.34</b>
2	Operation & Maintenance Costs	656.25	714.98	779.54	845.51	918.08
3	O&M Carrying Costs	-	-	-	-	-
4	Depreciation	560.22	686.59	918.56	1035.26	1046.4
5	Advance Against Depreciation	-	-	-	-	-
6	Income Tax	52.8	71.69	90.16	95.86	98.86
7	Special Appropriation( True-up of 1 <sup>st</sup> control period)	(-)61.73	-	-	-	-
<b>11</b>	<b>Expenses Capitalized (12 &amp; 13)</b>	<b>153.1</b>	<b>168.53</b>	<b>158.71</b>	<b>164.52</b>	<b>181.15</b>
12	IDC Capitalized	-	-	-	-	-
13	O&M Expenses Capitalized	153.1	168.53	158.71	164.52	181.15
<b>14</b>	<b>Net Expenditure (1 - 11)</b>	<b>752.44</b>	<b>1304.73</b>	<b>1629.55</b>	<b>1812.11</b>	<b>1882.19</b>
15	Return on Capital Employed	759.94	1031.92	1297.82	1379.84	1423.05
16	Non Tariff Income	128.92	135.28	141.93	148.88	156.26
<b>17</b>	<b>Net Revenue Requirement (14+15-16)</b>	<b>1685.46</b>	<b>2201.37</b>	<b>2785.44</b>	<b>3043.07</b>	<b>3148.98</b>
<b>18</b>	<b>Tariff &amp; Revenue (Rs/KW/Month)</b>	<b>65.30</b>	<b>76.66</b>	<b>91.36</b>	<b>95.37</b>	<b>94.44</b>
<b>19</b>	<b>Capacity, MW</b>	<b>21509</b>	<b>23931</b>	<b>25407</b>	<b>26589</b>	<b>27786</b>
	CPDCL	9713.59	10806.1	11460.2	11977	12487.3
	EPDCL	3332.06	3706.84	3931.2	4108.47	4283.54
	NPDCL	3346.82	3723.26	3948.61	4126.68	4302.52
	SPDCL	4696.52	5224.76	5541	5790.87	6037.62
	3rd Party / Open Access	420	470	526	586	675



## ACRONYMS AND ABBREVIATIONS

<b>A&amp;G</b>	Administration and General
<b>APERC</b>	Andhra Pradesh Electricity Regulatory Commission
<b>APGENCO</b>	Generation Corporation of Andhra Pradesh
<b>APPCC</b>	AP Power Co-ordination Committee
<b>APTRANSCO</b>	Transmission Corporation of Andhra Pradesh Limited
<b>ARR</b>	Aggregate Revenue Requirement
<b>C&amp;AG</b>	Comptroller and Audit-General
<b>CAPEX</b>	Capital Expenditure
<b>CERC</b>	Central Electricity Regulatory Commission
<b>CGM</b>	Chief General Manager
<b>COD</b>	Date of Commission
<b>CPI</b>	Consumer Price Index
<b>Cr</b>	Crore
<b>DISCOMs</b>	Distribution Companies
<b>ED</b>	Executive Director
<b>EHT</b>	Extra High Tension
<b>GIS</b>	Gas Insulated Substation
<b>GoAP</b>	Government of Andhra Pradesh
<b>GoI</b>	Government of India
<b>IDC</b>	Interest During Construction
<b>IP1 license</b>	Infrastructure Provider 1 License
<b>IPP</b>	Independent Power Producer
<b>ISTS</b>	Inter State Transmission System
<b>kW</b>	Kilo-watt
<b>LOA</b>	Letter of Acceptance
<b>MW</b>	Mega-watt
<b>MYT</b>	Multi Year Tariff
<b>NEDCAP</b>	Non-Conventional Energy Development Corporation of Andhra Pradesh
<b>NTI</b>	Non-Tariff Income
<b>NTPC</b>	National Thermal Power Corporation
<b>O&amp;M</b>	Operating and Maintenance

<b>O.P No.</b>	Original Petition Number
<b>OA</b>	Open Access
<b>OFC</b>	Optical Fiber Cable
<b>PFC</b>	Power Finance Corporation
<b>PGCIL</b>	Power Grid Corporation of India Limited
<b>POWER GRID</b>	Power Grid Corporation of India Limited
<b>PPA</b>	Power Purchase Agreement
<b>PSU</b>	Public Sector Undertaking
<b>R&amp;M</b>	Repair and Maintenance
<b>RAC</b>	Regulatory Affairs Cell
<b>RE</b>	Revised Estimate
<b>RKM</b>	Route Kilometers
<b>ROCE</b>	Return on Capital Employed
<b>RoE</b>	Return on Equity
<b>RRB</b>	Regulated Rate Base
<b>SCADA</b>	Supervisory Control and Data Acquisition
<b>SRLDC</b>	Southern Regional Load Dispatch Centre
<b>SRPC</b>	Southern Regional Power Committee
<b>STU</b>	State Transmission Utility
<b>T.O.O</b>	TRANSCO Office Order
<b>TL&amp;SS</b>	Transmission Lines and Substation
<b>UMPP</b>	Ultra Mega Power Project
<b>WPI</b>	Wholesale Price Index

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