

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 47/TT/2013**

**Coram:**

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

**Date of Hearing : 17.03.2015  
Date of Order : 21.12.2015**

**In the matter of:**

Approval of transmission tariff for Asset-I: 315 MVA, 400/220/33 kV 3-Phase Spare Transformer initially planned at Madurai S/S but later diverted to Hyderabad Sub-station (Anticipated COD: 1.2.2013) and Asset-II: 400 kV, 80 MVAR Spare Reactor at Gooty Sub-station (COD: 1.1.2013) under provision of Spare ICTs for Southern Region for tariff block 2009-14 under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999, and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009.

**And in the matter of:**

Power Grid Corporation of India Limited,  
"Saudamini", Plot No.2,  
Sector-29, Gurgaon-122 001

**...Petitioner**

**Vs**

1. Karnataka Power Transmission Corporation Limited,  
(KPTCL), Kaveri Bhavan,  
Bangalore-560 009
2. Transmission Corporation of Andhra Pradesh Limited,  
(APTRANSCO), Vidyut Soudha,  
Hyderabad-500 082
3. Kerala State Electricity Board (KSEB),  
Vaidyuthi Bhavanam, Pattom,  
Thiruvananthapuram-695 004
4. Tamil Nadu Electricity Board (TNEB),  
NPKRR Maaligai, 800, Anna Salai,  
Chennai-600 002



5. Electricity Department,  
Government of Goa,  
Vidyut Bhawan, Panaji,  
Goa-403 001
6. Electricity Department,  
Government of Pondicherry,  
Pondicherry-605 001
7. Eastern Power Distribution Company of Andhra Pradesh Limited,  
(APEPDCL)  
APEPDCL, P&T Colony, Seethmmadhara, Vishakhapatam,  
Andhra Pradesh
8. Southern Power Distribution Company of Andhra Pradesh Limited,  
(APSPDCL)  
Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor Road, Kesavayana Gunta,  
Tirupati-517 501, Chittoor District, Andhra Pradesh
9. Central Power Distribution Company of Andhra Pradesh Limited,  
(APCPDCL)  
Corporate Office, Mint Compound,  
Hyderabad-500 063, Andhra Pradesh
10. Northern Power Distribution Company of Andhra Pradesh Limited,  
(APNPDCL)  
Opposite NIT Petrol Pump,  
Chaitanyapuri, Kazipet,  
Warangal-506 004, Andhra Pradesh
11. Bangalore Electricity Supply Company Limited (BESCOM),  
Corporate Office, K.R.Circle,  
Bangalore-506 001, Andhra Pradesh
12. Gulbarga Electricity Supply Company Limited (GESCOM),  
Station Main Road,  
Gulbarga, Karnataka
13. Hubli Electricity Supply Company Limited (HESCOM),  
Navanagar, PB Road,  
Hubli, Karnataka
14. Mescom Corporate Office,  
Paradigm Plaza, AB Shetty Circle,  
Mangalore-575 001, Karnataka
15. Chamundeswari Electricity Supply Corporation Limited (CESC),  
# 927, L J Avenue, Ground Floor,  
New Kantharaj Urs Road,



**For petitioner** : Shri S. S. Raju, PGCIL  
Shri S. K. Venkatesan, PGCIL  
Shri Jasbir Singh, PGCIL  
Shri M. M. Mondal, PGCIL

**For respondents** : None

**ORDER**

This petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval for determination of transmission tariff for Asset-I: 315 MVA, 400/220/33 kV 3-Phase Spare Transformer initially planned at Madurai S/S but later diverted to Hyderabad Sub-station and Asset-II: 400 kV, 80 MVAR Spare Reactor at Gooty Sub-station (hereinafter referred to as “transmission assets”) under provision of Spare ICTs for Southern Region for the period from the date of commercial operation to 31.3.2014, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, (hereinafter referred to as “the 2009 Tariff Regulations”).

2. Investment approval (IA) of the project was accorded by Board of Directors of the petitioner vide Memorandum No. C/CP/Spare ICTs & Reactors dated 4.8.2011 at an estimated cost of ₹1890 lakh including IDC of ₹51 lakh (based on 1st Quarter, 2011 price level).

3. The Investment Approval was accorded for provision of spare ICTs and reactors together for Eastern, Northern, Southern and Western region and the spare transformer/reactors for Southern Region were covered under Part-III of the Investment Approval. The scope of work covered under the Part-III of the



approval is as under:-

<b>Numbers of Spare Transformers/Reactors</b>	<b>Proposed Locations</b>
1 no. 315 MVA, 400/220/33 kV ICTs	Madurai (Tamil Nadu)
1 no. 80 MVAR Shunt Reactor	Gooty (A.P.)

4. The petitioner filed the petition with anticipated date of commissioning as 1.2.2013 in the case of Asset-I (Interchanged to Asset-II) but vide affidavit dated 4.9.2013 submitted the actual COD as 1.3.2013. Further, the petitioner vide affidavit dated 1.7.2015 has interchanged the asset description vis-à-vis to the original petition and has submitted all applicable certificates and tariff forms as per the interchanged description. Accordingly, for the purpose of tariff, the asset numbers have also been considered in this order and the details are as below:-

<b>Particulars</b>	<b>Schedule COD as per IA</b>	<b>Actual COD</b>	<b>Delay</b>
Asset-I: 400 kV, 80 MVAR Spare Reactor at Gooty Sub-station	1.1.2013	1.1.2013	No delay
Asset-II: 315 MVA, 400/220/33 kV 3-Phase Spare Transformer initially planned at Madurai Sub-station but later diverted to Hyderabad Sub-station		1.3.2013	2 months

5. Further, the petitioner vide affidavit dated 1.7.2015 has submitted that though Asset-II was initially proposed for the location at Madurai (Tamil Nadu), the new ICT was diverted to Hyderabad on the request of TANTRANSCO as was discussed and agreed in the 20<sup>th</sup> meeting of Commercial Sub-Committee to SRPC held on 15.11.2012 and subsequently approved in 21<sup>st</sup> SRPC meeting held on 2.2.2013.



6. Provisional tariff in respect of the above mentioned assets was approved by the Commission vide its order dated 18.3.2013. This was subject to adjustment as per Regulation 5 (4) of the 2009 Tariff Regulations.

7. This order has been issued after considering the petitioner's affidavits dated 4.9.2013, 1.4.2014 and 1.7.2015.

8. Details of the transmission charges claimed by the petitioner are as under:-

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Depreciation	5.22	24.26	4.57	56.75
Interest on Loan	6.05	26.95	5.46	65.43
Return on equity	5.75	27.03	5.03	63.24
Interest on Working Capital	0.39	1.80	0.35	4.27
O & M Expenses	-	-	-	-
<b>Total</b>	<b>17.41</b>	<b>80.04</b>	<b>15.41</b>	<b>189.69</b>

9. The details submitted by the petitioner in support of its claim for Interest on Working Capital are as below:-

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Maintenance Spares	-	-	-	-
O & M expenses	-	-	-	-
Receivables	11.61	13.34	30.81	31.62
<b>Total</b>	<b>11.61</b>	<b>13.34</b>	<b>30.81</b>	<b>31.62</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%
<b>Interest</b>	<b>0.39</b>	<b>1.80</b>	<b>0.35</b>	<b>4.27</b>

10. No comments have been received from the general public in response to the notices published in news papers by the petitioner under Section 64 of the Electricity Act, 2003. Tamil Nadu Generation and Distribution Corporation



Limited (TANGEDCO), a subsidiary of TNEB Limited and one of the successor entities to the erstwhile Tamil Nadu Electricity Board (TNEB), Respondent No.4 has filed reply vide affidavit dated 10.4.2013. TANGEDCO has raised issues of additional return on equity and non-eligibility for incentive for increase in the availability as it is a spare system to improve the overall availability of the critical equipment. The petitioner has filed rejoinder dated 31.3.2014 to the reply of TANGEDCO. The objections raised by the respondent and the clarifications given by the petitioner are addressed in the relevant paragraphs of this order.

11. TANGEDCO in its reply has submitted that the petitioner is not eligible for incentive for increase in the availability as it is a spare system to improve the overall availability of the critical equipment. We would like to clarify that the provision of incentive beyond normative availability is provided for improved availability for a system. One of the aspects due to which the availability is enhanced is the spares which are allowed under the Regulations as capital expenditure. The petitioner is already availing due returns and tariff on the spare transformer even when not in use just because it may be used in times of contingency to enhance availability of existing system. Accordingly, it is clarified that any incentive beyond normative availability factor is not admissible for any spare. The petitioner is already earning incentive on existing system by use of spare and there cannot be double benefit to the petitioner for the same.

12. Having heard the parties and perused the material on record, we proceed to dispose of the petition.



## **Capital Cost**

13. As regards the capital cost, Regulation 7(1) of the 2009 Tariff Regulations provides as follows:-

**“(1) Capital cost for a project shall include:-**

- (a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the fund deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.
- (b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and
- (c) additional capital expenditure determined under regulation 9:

Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:

Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.”

14. The Commission, vide “Record of Proceedings” for hearing dated 17.3.2015, had directed the petitioner to submit certain information for the purpose of determination of transmission tariff as per true-up provisions of the 2009 Tariff Regulations. However, the information submitted by the petitioner vide affidavit dated 1.7.2015 is insufficient for determination of true-up tariff. Accordingly, instead of true-up, final tariff is being determined in the instant petition and the



petitioner is once again directed to submit the required information along with the true-up petition.

15. The petitioner has submitted the Auditor's Certificate dated 1.5.2015 in respect of capital expenditure as on COD and additional capital expenditure for the years 2012-13, 2013-14 and 2015-16 for the instant assets. The petitioner has submitted that there is no additional capital expenditure during the year 2014-15 in the case of instant assets. The details of apportioned approved cost, actual expenditure incurred as on the date of commercial operation and details of additional capital expenditure (hereinafter "add cap") incurred/projected to be incurred for the instant assets covered in the petition are summarized below:-

(₹ in lakh)

Particulars	Apportioned approved cost	Cost incurred upto COD	Add-cap		Capital cost as on 31.3.2014	Add-cap 2015-16*	Total estimate completion cost
			2012-13	2013-14			
Asset-I	621.00	344.43	101.98	26.01	472.42	13.36	485.78
Asset-II	1269.00	1037.56	-	74.62	1112.18	-	1112.18

\*Additional capital expenditure for 2015-16 falls beyond the tariff period and hence has not been considered in this order for the purpose of tariff.

16. Further, the Auditor's Certificate dated 1.5.2015 submitted by the petitioner in support of the capital expenditure incurred, states "This is to certify that the above summary has been prepared on the basis of the information drawn from the Audited Statement of Accounts of Power Grid Corporation of India Ltd, SRTS-I, Secunderabad for the period ended 31.3.2015." Thus, it is not clear from the Auditor's Certificate whether the capital expenditure has been indicated on cash basis or accrual basis. In addition, the petitioner has submitted Form-9A, but there is no indication of any liability as on COD and thereafter, whereas as per Form-9 for "Statement of Additional Capitalisation after COD", the petitioner has submitted





the justification that the additional capital expenditure is in the nature of balance and retention payments. Further, as per the statement of Discharge of IDC submitted by the petitioner, it is noted that the total claimed amount of IDC has not been discharged as on COD and some amount has been discharged during 2012-13 and 2013-14. Thus, there is a mismatch between Form-9A, Form-9 and statement of Discharge of IDC. Thus, as per the information submitted by the petitioner, it is not possible to determine the capital cost as on COD on cash basis and the nature of additional capital expenditure, so as to consider the same to be just discharge of liability or as an addition to the Gross Block. As such, the information submitted by the petitioner is inadequate for the purpose of determination of transmission tariff as per the true-up provisions of the 2009 Tariff Regulations. In view of above, we have no option but to proceed with the determination of the final tariff in the instant petition and the petitioner is directed to submit the capital cost statement on cash basis indicating element wise (i.e. Land, building and civil work, TL and sub-station etc.) and year wise actual expenditure incurred up to 31.3.2014 along with element wise details of undischarged liability as on COD and at the end of the financial year duly certified by the Auditors along with the true-up petition.

### **Treatment of IDC & IEDC**

17. As per the Auditor's Certificate dated 1.5.2015 submitted by the petitioner, an amount of ₹0.23 lakh and ₹89.32 lakh on account of IDC has been capitalised in the case of Asset-I and Asset-II respectively. The petitioner vide affidavit dated 1.7.2015 has submitted statement indicating discharge of IDC. However, in view of, non-availability of complete information, the claim of the petitioner on account of IDC as on COD has been worked out as per available



information as on COD on cash basis as ₹0.23 lakh and ₹30.30 lakh in the case of Asset-I and Asset-II respectively and considered in the instant petition for the purpose of tariff. However, the petitioner is directed to submit all relevant and adequate information as earlier directed at the time of truing-up petition.

18. The petitioner has also claimed an amount of ₹3.38 lakh and ₹7.34 lakh on account of Incidental Expenditure During Construction (IEDC) in the case of Asset-I and Asset-II respectively and has submitted that the same have been discharged as on COD. Hence, the amount of ₹3.38 lakh and ₹7.34 lakh on account of IEDC in the case of Asset-I and Asset-II respectively has been considered and is allowed for the purpose of tariff calculation in the instant petition.

19. Regulation 9 of the 2009 Tariff Regulations provides for the treatment of undischarged liabilities after the same are discharged. However, as the petitioner has not submitted the required information with regard to the IDC actually discharged, we are not inclined to allow the amount of IDC as claimed by the petitioner. The petitioner is directed to submit the amount of IDC paid and specific to the transmission asset considered in this petition upto date of commercial operation and balance IDC discharged after date of commercial operation. IDC allowed will be reviewed at the time of truing-up on submission of adequate and proper information by the petitioner in respect of interest during construction at the time of truing-up.



### **Cost over-run/cost variation**

20. The estimated completion cost as on 31.3.2014 and total estimated completion cost is within the apportioned approved cost. Thus, there is no cost over-run in the case of instant assets. However, there is cost variation in "Erection and Spares" as per Form-5B. The reason for cost escalation of Erection and Spares has been submitted on account of change in price level of awarded package through competitive bidding and is hence allowed.

### **Time over-run**

21. The project was scheduled to be commissioned within 16 months from the date of IA i.e. 4.8.2011. Accordingly, the scheduled commissioning works out to 3.12.2012 i.e. 1.1.2013. The Asset-I and Asset-II were commissioned 1.1.2013 and 1.3.2013. Thus, there is no time over-run in the case of Asset-I. However, as discussed at para-4 there is a delay in commissioning in the case of Asset-II.

22. The petitioner was directed to submit the reasons alongwith documentary evidence and detailed chronology of events leading to time over-run in the case of Asset-II.

23. The petitioner vide affidavit dated 1.7.2015 submitted the following reasons for delay in commissioning of Asset-II:-

- a) One number 400/220 kV 315 MVA ICT was approved for Southern Region as O&M spare to be kept at Madurai Sub-station during 13<sup>th</sup> SRPC meeting held on 11.5.2010.
- b) Procurement action was initiated with commissioning schedule as 1.1.2013. Dispatch of transformer, inter-alia, was being monitored



to achieve the scheduled commissioning. Accordingly, the ICT was ready for dispatch during November, 2012.

- c) In the mean time, TANTRANSCO informed that one of its Transformers had failed at Sriperumbudur. The Transformer at Sriperumbudur, though owned by TANTRANSCO, was part of NLC evacuation system and charges for the same were being paid by all SR beneficiaries to TANTRANSCO. The petitioner was requested to divert one transformer kept as O&M spare to meet contingency at Hyderabad Sub-station which was in healthy condition. In view of above, the new ICT to be placed at Madurai Sub-station which was getting ready for dispatch at the works of manufacturers (CGL) was kept under hold keeping reallocation of suitable place to keep the spare transformer.
- d) The request of TANTRANSCO for diversion of one transformer and urgent need of transformer at Sriperumbudur was discussed during 20<sup>th</sup> meeting of commercial sub-committee to SRPC held on 15.11.2012 and it was decided to divert the transformer at Hyderabad to Sriperumbudur.
- e) Subsequently, diversion of spare transformer from Hyderabad Sub-station to Sriperumbudur, TANTRANSCO was approved in 21<sup>st</sup> SRPC meeting held on 2.2.2013. It was also decided during the meeting that this transformer at Hyderabad would be treated as in-lieu of the one spare transformer already approved in the 13<sup>th</sup> SRPC Meeting, as Hyderabad is strategically more appropriate place to keep the spare transformer. Thus, keeping in view the reliability and grid security, it was found prudent to divert the proposed spare transformer from Madurai to Hyderabad. Accordingly, dispatch instructions were issued for the transformer which was kept under hold for about two months at the manufacturer's works to be supplied to Hyderabad instead of Madurai. Thus, the new transformer was supplied to Hyderabad



and commissioned on 1.3.2013, i.e. two months after the scheduled date of commissioning.

- f) Thus, the transformer to be kept as spare one at Madurai was ready for supply and commissioning as per its schedule on 1.1.2013. However, in view of diversion of transformer from Hyderabad to Sriperumbudur, the new transformer was required to be kept under hold at manufacturer's works till the final decision and was subsequently diverted to Hyderabad and finally commissioned on 1.3.2013 after a delay of two months.

24. We have considered the submissions of the petitioner. It is observed that on the request of TANTRANSCO, the healthy spare transformer at Hyderabad, kept to meet any contingency, was diverted to Sriperumbudur as one of its transformers there failed. This relocation of transformer from Hyderabad to Sriperumbudur was agreed by the constituents of SR in the 20<sup>th</sup> meeting of commercial sub-committee to SRPC held on 15.11.2012. As per the submissions of the petitioner, the 315 MVA, 400/220/33 kV 3-Phase Transformer was ready for dispatch during November, 2012. But, the delivery of the transformer was put on hold till the sub-committee of commercial of SRPC decided to keep the spare transformer at Hyderabad instead of Madurai to maintain the reliability and grid security. This has caused a delay two months in the commissioning of Asset-II. We are of the view that the time over-run of two months is not attributable to the petitioner. Therefore, the time over-run in the commissioning of Asset-II is condoned.



### **Initial Spares**

25. Regulation 8 of 2009 Tariff Regulations provides that initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:-

Transmission line	:	0.75%
Transmission sub-station	:	2.5%
Series compensation devices & HVDC Station	:	3.5%

26. The petitioner has claimed initial spares of ₹9.98 lakh and ₹14.07 lakh for Asset-I and Asset-II respectively, which are within the ceiling limits specified. Thus, the claim for initial spares is allowed as claimed by the petitioner. However, the claim for initial spares is subject to review at the time of truing-up petition on submission of required information by the petitioner.

### **Capital cost as on COD**

27. The details of the capital cost considered as on the date of commercial operation after allowing capitalization of IDC, IEDC (as claimed) and admissible initial spares for the purpose of the determination of transmission tariff is as follows:-

(₹ in lakh)			
Particulars	Capital cost as on COD claimed	IDC disallowed	Capital Cost as on COD allowed
Asset-I	344.43	-	344.43
Asset-II	1037.56	59.02	978.54

### **Additional Capital Expenditure**

28. As regards Additional Capital Expenditure clause 9(1) of the 2009 Tariff Regulations provides as under:-



“Additional Capitalisation: (1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) Undischarged liabilities;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital Spares within the original scope of work, subject to the provisions of Regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law.”

29. Further, the 2009 Tariff Regulations defines cut-off date as follows:-

“cut-off date means 31<sup>st</sup> march of the year closing after 2 years of the year of commercial operation of the project, and incase of the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31<sup>st</sup> March of the year closing after 3 years of the year of commercial operation”.

30. Therefore, the cut-off date for the instant assets is 31.3.2016 i.e. tariff period 2014-19.

31. It is observed that the additional capital expenditure claimed by the petitioner falls within the cut-off date and is mainly on account of balance and retention payments. Additional capital expenditure for 2015-16 claimed by the petitioner falls beyond the tariff period i.e. 2009-14 and is not being allowed for calculation of tariff for the period up to 31.3.2014. However, the actual Additional capital expenditure to be allowed is subject to review at the time of truing-up petition on submission of information about the liabilities included in the capital cost as on COD and further claim of the same as Additional capital expenditure.



### Capital cost as on 31.3.2014

32. In view of above, the details of admitted capital cost as on COD and admissible additional capital expenditure, capital cost as on 31.3.2014 is as under:-

Particulars	Capital Cost allowed as on COD	Add cap for		Total Completion Cost as on 31-3-2014
		2012-13	2013-14	
Asset-I	344.43	101.98	26.01	472.42
Asset-II	978.54	-	74.62	1053.16

### Debt- Equity Ratio

33. Regulation 12 of the 2009 Tariff Regulations provides as under:--

“12. **Debt-Equity Ratio.** (1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

**Explanation.-** The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”





34. The petitioner has claimed debt: equity ratio of 70:30 as on the date of commercial operation of the assets. The details of debt-equity in respect of the assets covered in this petition as on date of commercial operation and as on 31.3.2014 respectively are as under:-

Particulars	Asset-I			
	Capital cost as on COD		Capital cost as on 31.3.2014	
	Amount (₹ in lakh)	%	Amount (₹ in lakh)	%
Debt	241.10	70.00	330.69	70.00
Equity	103.33	30.00	141.73	30.00
<b>Total</b>	<b>344.43</b>	<b>100.00</b>	<b>472.42</b>	<b>100.00</b>
Particulars	Asset-II			
	Capital cost as on COD		Capital cost as on 31.3.2014	
	Amount (₹ in lakh)	%	Amount (₹ in lakh)	%
Debt	684.98	70.00	737.21	70.00
Equity	293.56	30.00	315.95	30.00
<b>Total</b>	<b>978.54</b>	<b>100.00</b>	<b>1053.16</b>	<b>100.00</b>

35. The above stated debt-equity ratio has been applied for the purpose of tariff calculation in this order.

### **Return on Equity**

36. Regulation 15 of the 2009 Tariff Regulations provides that:-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:



Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be:

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

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

Where t is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee as the case may be, shall recover the shortfall or refund the excess Annual Fixed charge on account of Return on Equity due to change in applicable Minimum Alternate/ Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission;

Provided further that Annual Fixed charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective financial year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations".

37. The petitioner has submitted that it may be allowed to recover the shortfall or refund the excess Annual Fixed Charges, on account of return on equity due to change in applicable Minimum Alternate Tax/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly without making any application before the Commission. We wish to clarify that in respect of instant assets pre-tax ROE of 20.008% p.a and 20.9605% p.a have been considered for the years 2012-13 and 2013-14 respectively, on average equity as per Regulation 15 of the 2009 Tariff Regulations in this order itself.

38. The Details of return on equity calculated are as given overleaf:-



(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Opening Equity	103.33	133.92	293.56	293.56
Addition due to Additional Capitalisation	30.59	7.80	-	22.39
Closing Equity	133.92	141.73	293.56	315.95
Average Equity	118.63	137.82	293.56	304.76
Return on Equity (Base Rate )	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>
Tax rate for the year 2008-09 (MAT)	20.008%	20.9605%	20.008%	20.9605%
Rate of Return on Equity (Pre Tax )	19.377%	19.610%	19.377%	19.610%
<b>Return on Equity (Pre Tax)</b>	<b>5.75</b>	<b>27.03</b>	<b>4.74</b>	<b>59.76</b>

39. TANGEDCO has submitted that the claim of the petitioner for additional return on equity is incorrect, in view of, completion of whole project beyond scheduled time. The petitioner had initially claimed additional RoE while filing the original petition for the instant assets. However, the petitioner while submitting the revised tariff forms vide affidavit dated 1-7-2015, has not claimed any additional RoE for the instant assets and as such no additional RoE has been allowed in the instant order.

### Interest on Loan

40. Regulation 16 of the 2009 Tariff Regulations provides that:-

“16. (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

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

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:



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

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

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

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

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

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

41. In these calculations, interest on loan has been worked out as under:-
- (a) Gross amount of loan, repayment of instalments & rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition;
  - (b) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that period;
  - (c) Weighted average rate of interest on actual average loan worked out as per (a) above is applied on the notional average loan during the year to arrive at the interest on loan.

42. The petitioner has submitted that the interest on loan has been



considered on the basis of rate prevailing as on respective CODs and the change in interest due to floating rate of interest applicable, if any, for the project needs to be claimed/ adjusted over the tariff block 2009-14. We would like to clarify that the interest on loan has been calculated on the basis of rate prevailing as on the date of commercial operation. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing up.

43. Detailed calculation of the weighted average rate of interest has been given at Annexure-1 to 2 of this order.

44. Details of Interest on Loan calculated are as under:-

Particulars	Asset-I		Asset-II	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Gross Normative Loan	241.10	312.49	684.98	684.98
Cumulative Repayment upto Previous Year	-	5.22	-	4.31
Net Loan-Opening	241.10	307.27	684.98	680.67
Addition due to Additional Capitalisation	71.39	18.21	-	52.23
Repayment during the year	5.22	24.26	4.31	53.64
Net Loan-Closing	307.27	301.22	680.67	679.27
Average Loan	274.18	304.24	682.83	679.97
Weighted Average Rate of Interest on Loan	8.8188%	8.8583%	9.0511%	9.0941%
<b>Interest</b>	<b>6.04</b>	<b>26.95</b>	<b>5.15</b>	<b>61.84</b>

### **Depreciation**

45. Regulation 17 of the 2009 Tariff Regulations provides for computation of depreciation in the following manner, namely:-

“17. **Depreciation** (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

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



Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site;

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

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

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

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

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.”

46. Date of commercial operation of assets covered in the petition fall in the year 2012-13. Accordingly, the assets will complete 12 years beyond 2013-14 and thus depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III of the 2009 Tariff Regulations.

47. Details of the depreciation allowed are as under:-

Particulars	(₹ in lakh)			
	Asset-I		Asset-II	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Opening Gross Block	344.43	446.41	978.54	978.54
Additional Capital expenditure	101.98	26.01	-	74.62
Closing Gross Block	446.41	472.42	978.54	1053.16
Average Gross Block	395.42	459.42	978.54	1015.85
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	355.88	413.47	880.69	914.27
Remaining Depreciable Value	355.88	408.25	880.69	909.96
<b>Depreciation</b>	<b>5.22</b>	<b>24.26</b>	<b>4.31</b>	<b>53.64</b>



### **Operation & Maintenance Expenses (O&M Expenses)**

48. The petitioner has not claimed O&M Expenses for the instant assets filed in the instant petition as these being Spare Reactor and ICT at the Gooty and Hyderabad Sub-stations of Southern Region. Accordingly, no O&M Expenses are allowed in respect of the assets covered in the instant petition.

49. The petitioner has submitted that O & M Expenses for the period 2009-14 were arrived at on the basis of normalized actual O & M Expenses during the period 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking has also been considered while calculating the O & M Expenses for the tariff period 2009-14. The petitioner has further submitted that it would approach the Commission for additional manpower cost on account of wage revision (if any) during the tariff block 2009-14 for claiming in the tariff.

50. The petitioner has also submitted that the claim for transmission tariff is exclusive of any statutory taxes, levies, duties, cess or any other kind of impositions etc. Such kinds of payments are generally included in the O & M Expenses. While specifying the norms for the O & M Expenses, the Commission has in the 2009 Tariff Regulations, given effect to impact of pay revision by factoring 50% on account of pay revision of the employees of PSUs after extensive consultations with the stakeholders, as one time compensation for employee cost. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. In this order, we have not allowed O&M Expenses as the petitioner has not made any claim for



the instant assets being spare Reactor and ICT and in any case the O&M Expenses are allowable as per the existing norms.

### **Interest on Working Capital**

51. As per the 2009 Tariff Regulations the components of the working capital and the interest thereon are discussed under:-

#### **(i) Receivables**

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables will be equivalent to two months average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

#### **(ii) Maintenance spares**

Regulation 18(1)(c)(ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M Expenses from 1.4.2009. However, as no O & M Expenses have been claimed in the instant petition for the instant assets being spare Reactor and ICT, no maintenance spares has been considered in the working capital.

#### **(iii) O & M Expenses**

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for O&M Expenses for one month as a component of working capital. The petitioner has not claimed O&M Expenses in the instant petition for the





instant assets being spare Reactor and ICT, no O & M Expenses have been considered in the working capital.

**(iv) Rate of interest on working capital**

As provided under 18(3) of the 2009 Tariff Regulations, SBI Base rate of 10.00% as on 1.4.2012 plus 350 BPS i.e. 13.50% has been considered for the purpose of working out the interest on working capital.

52. Necessary computations in support of interest on working capital are as below:-

Particulars	(₹ in lakh)			
	Asset-I		Asset-II	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Maintenance Spares	-	-	-	-
O & M expenses	-	-	-	-
Receivables	11.60	13.34	29.05	29.88
<b>Total</b>	<b>11.60</b>	<b>13.34</b>	<b>29.05</b>	<b>29.88</b>
<b>Interest</b>	<b>0.39</b>	<b>1.80</b>	<b>0.33</b>	<b>4.03</b>

**Transmission Charges**

53. The transmission charges being allowed for the transmission assets are as under:-

Particulars	(₹ in lakh)			
	Asset-I		Asset-II	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Depreciation	5.22	24.26	4.31	53.64
Interest on Loan	6.04	26.95	5.15	61.84
Return on equity	5.75	27.03	4.74	59.76
Interest on Working Capital	0.39	1.80	0.33	4.03
O & M Expenses	-	-	-	-
<b>Total</b>	<b>17.40</b>	<b>80.04</b>	<b>14.52</b>	<b>179.27</b>



### **Filing Fee and the Publication Expenses**

54. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis in accordance with Regulation 42 of the 2009 Tariff Regulations.

### **Licence Fee**

55. The petitioner has submitted that in O&M norms for tariff block 2009-14 the cost associated with license fees had not been captured and the license fee may be allowed to be recovered separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42 A (1) (b) of the 2009 Tariff Regulations

### **Service Tax**

56. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is subjected to such service tax in future. The petitioner submitted that service tax on transmission has been put on negative list w.e.f. 1.4.2012 and therefore the transmission charges, is exclusive of service tax and shall be born and additionally paid by the respondents. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

### **Sharing of Transmission Charges**

57. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory



Commission (Sharing of Inter-State Transmission Charges and Losses)  
Regulations, 2010, as amended from time to time.

58. This order disposes of Petition No. 47/TT/2013.

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

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

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



**Annexure-I**

(₹ in lakh)

<b>CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN</b>			
	<b>Details of Loan</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XXXIV</b>		
	Gross loan opening	<b>17.39</b>	<b>17.39</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	17.39	17.39
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	17.39	17.39
	Average Loan	17.39	17.39
	Rate of Interest	8.84%	8.84%
	Interest	1.54	1.54
	Rep Schedule	12 annual instalments from 21-10-2014	
<b>2</b>	<b>Bond XXXVIII</b>		
	Gross loan opening	<b>10.00</b>	<b>10.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	10.00	10.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	10.00	10.00
	Average Loan	10.00	10.00
	Rate of Interest	9.25%	9.25%
	Interest	0.93	0.93
	Rep Schedule	Bullet repayment on 09-03-2027	
<b>3</b>	<b>Bond XLII</b>		
	Gross loan opening	<b>213.71</b>	<b>285.10</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	213.71	285.10
	Additions during the year	71.39	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	285.10	285.10
	Average Loan	249.41	285.10
	Rate of Interest	8.80%	8.80%
	Interest	21.95	25.09
	Rep Schedule	Bullet Payment on 13.3.2023	
<b>4</b>	<b>SBI (21-03-2012) For Add Cap.</b>		
	Gross loan opening	<b>0.00</b>	<b>0.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	18.21
	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	18.21
	Average Loan	0.00	9.11
	Rate of Interest	10.29%	10.29%
	Interest	0.00	0.94
	Rep Schedule	22 annual instalments from 31.08.2016	



	<b>Total Loan</b>		
	Gross loan opening	241.10	312.49
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	241.10	312.49
	Additions during the year	71.39	18.21
	Repayment during the year	0.00	0.00
	Net Loan-Closing	312.49	330.70
	Average Loan	276.80	321.60
	Rate of Interest	<b>8.8188%</b>	<b>8.8583%</b>
	<b>Interest</b>	<b>24.41</b>	<b>28.49</b>



**Annexure-2**

(₹ in lakh)

<b>CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN</b>			
	<b>Details of Loan</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XXXIV</b>		
	Gross loan opening	<b>171.39</b>	<b>171.39</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	171.39	171.39
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	171.39	171.39
	Average Loan	171.39	171.39
	Rate of Interest	8.84%	8.84%
	Interest	15.15	15.15
	Rep Schedule	12 annual instalments from 21-10-2014	
<b>2</b>	<b>Bond XXXVIII</b>		
	Gross loan opening	<b>390.00</b>	<b>390.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	390.00	390.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	390.00	390.00
	Average Loan	390.00	390.00
	Rate of Interest	9.25%	9.25%
	Interest	36.08	36.08
	Rep Schedule	Bullet repayment on 09-03-2027	
<b>3</b>	<b>Bond XLII</b>		
	Gross loan opening	<b>164.90</b>	<b>164.90</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	164.90	164.90
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	164.90	164.90
	Average Loan	164.90	164.90
	Rate of Interest	8.80%	8.80%
	Interest	14.51	14.51
	Rep Schedule	Bullet Payment on 13.3.2023	
<b>4</b>	<b>SBI (31.03.2012)</b>		
	Gross loan opening	<b>0.00</b>	<b>0.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	52.23
	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	52.23
	Average Loan	0.00	26.12
	Rate of Interest	10.29%	10.29%
	Interest	0.00	2.69
	Rep Schedule	22 annual instalments from 31.08.2016	



	<b>Total Loan</b>		
	Gross loan opening	726.29	726.29
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	726.29	726.29
	Additions during the year	0.00	52.23
	Repayment during the year	0.00	0.00
	Net Loan-Closing	726.29	778.52
	Average Loan	726.29	752.41
	Rate of Interest	<b>9.0511%</b>	<b>9.0941%</b>
	<b>Interest</b>	<b>65.74</b>	<b>68.42</b>

