

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 195/TT/2012**

**Coram:**

**Shri V.S. Verma, Member  
Shri M. Deena Dayalan, Member**

**Date of Hearing : 30.07.2013  
Date of Order : 21.02.2014**

**In the matter of:**

Approval 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 for determination of transmission tariff for 1 No. 400 kV 63 MVAR line reactor at Cochin (DOCO-01.06.2012) for the period from DOCO to 31.03.2014 under Kundankulam ATS in SR for tariff block 2009-14.

**And in the matter of:**

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

.....Petitioner

**Vs**

1. Karnataka Power Transmission Corporation Ltd. (KPTCL),  
Kaveri Bhawan, Bangalore-560 009.
2. Transmission Corporation of Andhra Pradesh Ltd. (APTRANCO),  
Vidyut Soudha,  
Hyderabad-500 082.
3. Kerala State Electricity Board (KSEB),  
Vaidyuthi Bhavanam,  
Pattom, Thiruvananthapuram-695 004.
4. Tamil Nadu Electricity Board,  
NPKRR Maaligai, 800, Anna Salai,  
Chennai-600 002.
5. Electricity Department, Government of Goa,  
Vidyut Bhawan, Panaji,  
Near Mandvi Hotel, Goa-403 001.



6. Electricity Department, Government of Pondicherry,  
Pondicherry-605 001.
7. Eastern Power Distribution Company of Andhra Pradesh Ltd. (APEPDCL),  
APEPDCL, P&T Colony,  
Seethmmadhara, Vishakhapatnam,  
Andhra Pradesh.
8. Southern Power Distribution Company of Andhra Pradesh Ltd. (APSPDCL),  
Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor Road, Kesavayana Gunta,  
Tirupati-517 501.
9. Central Power Distribution Company of Andhra Pradesh Ltd. (APCPDCL),  
Corporate Office, Mint Compound,  
Hyderabad-500 063.
10. Northern Power Distribution Company of Andhra Pradesh Ltd. (APNPDCL),  
Opp. NIT Petrol Pump,  
Chaitanyapuri, Kazipet,  
Warangal-506 004.
11. Bangalore Electricity Supply Company Ltd. (BESCOM),  
Corporate Office, K. R. Circle,  
Bangalore-560 001.
12. Gulbarga Electricity Supply Company Ltd. (GESCOM),  
Station Main Road, Gulbarga.  
Karnataka.
13. Hubli Electricity Supply Company Ltd. (HESCOM),  
Navanagar, PB Road,  
Hubli, Karnataka.
14. MESCOM Corporate Office,  
Paradigm Plaza, AB Shetty Circle,  
Mangalore-575 001.
15. Chamundeswari Electricity Supply Corporation Ltd. (CESC),  
# 927, L J Avenue, Ground Floor,  
New Kantharaj Urs Road,  
Saraswatipuram, Mysore-570 009.

....Respondents

**For petitioner** : Shri S.S Raju, PGCIL  
Shri U. K. Tyagi, PGCIL  
Shri M. M. Mondal, PGCIL



**For respondents :** None

### **ORDER**

The petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of the transmission charges for 1 No. 400 kV 63 MVAR line reactor at Cochin (hereinafter referred to as "transmission asset"), from date of commercial operation (1.6.2012) to 31.3.2014 under Kudankulam ATS in Southern Region based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations").

2. The Investment Approval (IA) to the transmission project was accorded by Government of India vide letter dated 25.5.2005 at an estimated cost of ₹177929 lakh, including IDC of ₹7141 lakh. Further, Revised cost estimates of the project has been approved by Board of Directors, vide letter dated 3.9.2010, at an estimated cost of ₹215907 lakh including interest during construction of ₹22342 lakh at 1st Quarter 2010 price level. The subject asset was to be commissioned within 42 months from the date of investment approval i.e. by 1.12.2008.

3. The scope of works covered under the scheme broadly includes:-

#### **Transmission Lines**

- (i) Kundankulam (NPC) – Tirunelveli (Powergrid) 400 kV (Quad) D/C line-I
- (ii) Kundankulam (NPC) – Tirunelveli (Powergrid) 400 kV (Quad) D/C line-II
- (iii) Tirunelveli (Powergrid) - Udumalpet (Powergrid) 400 kV D/C line
- (iv) Tirunelveli (Powergrid) – Edamon (Kerala State Electricity Board) 400 kV multicircuit line.



- (v) Edamon (Kerala State Electricity Board) – Muvattupuzha (Powergrid)  
400 kV (Quad) D/C line
- (vi) Muvattupuzha (Powergrid) – North Trichur (Powergrid) 400kv (Quad)  
D/C line
- (vii) LILO of both circuits of Madurai (Powergrid) – Trivandrum (Powergrid)  
400 kV D/C line at Tirunelveli

**Sub-stations**

- (i) 400/220 kV Tirunelveli (Powergrid) Sub-station (New)
- (ii) 400/220 kV Muvattupuzha (Powergrid) Sub-station (New)
- (iii) 400/220 kV North Trichur (Powergrid) Sub-station (Extension)
- (iv) 400/220 kV Udumalpet (Powergrid) Sub-station (Extension)
- (v) 400/220 kV Trivendrum (Powergrid) Sub-station (Extension)

4. The petitioner has submitted Chartered Accountant's Certificate dated 15.6.2012 for the expenditure based on actual date of commercial operation of the transmission asset as on 1.6.2012. The instant petition covers determination of tariff based on actual expenditure incurred up to the date of commercial operation and projected additional capital expenditure to be incurred during the period from date of commercial operation (1.6.2012) to 31.3.2013 based on Chartered Accountant's certificate dated 15.6.2012.

5. The transmission charges claimed by the petitioner based on the actual date of commercial operation is as follows:-

(₹ in lakh)

<b>Particulars</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	28.88	36.27
Interest on Loan	25.16	29.72
Return on Equity	28.69	36.03
Interest on working capital	4.76	5.97
O & M Expenses	51.60	65.46
<b>Total</b>	<b>139.09</b>	<b>173.45</b>

6. The details submitted by the petitioner in support of its claim for interest on working capital are given hereunder:-

**(₹ in lakh)**

<b>Particulars</b>	<b>2012-13</b>	<b>2013-14</b>
Maintenance Spares	9.29	9.82
O & M Expenses	5.16	5.46
Receivables	27.82	28.91
<b>Total</b>	<b>42.27</b>	<b>44.19</b>
Rate of Interest	13.50%	13.50%
Interest	8.57	9.30

7. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act. None of the respondents have filed reply.

8. Having heard the representatives of the parties and perused the material on records, we proceed to dispose of the petition.

### **Capital cost**

9. Regulation 7 of the 2009 Tariff Regulations so far as relevant 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.”

10. The details of apportioned approved cost as on date of commercial operation and details of estimated additional capital expenditure projected to be incurred for the assets covered in the petition are summarized below:-

(₹ in lakh)				
Apportioned / approved cost	Apportioned / approved cost (RCE)	Expenditure as on DOCO	2012-13	Total estimated completion cost
386.00	698.00	625.98	60.97	686.95

11. Accordingly, following capital cost up to date of commercial operation of the transmission asset has been considered for the purpose of tariff:-

(₹ in lakh)		
DOCO	Capital Cost considered for the purpose of tariff before adjustment of IEDC/IDC & Initial Spares as on DOCO	Applicable period of Tariff
1.6.2012	625.98	1.6.2012 to 31.3.2014

### **Time over-run**

12. As per the IA dated 25.5.2005, the Kudankulam Transmission System was to be completed within 42 months from the date of IA i.e. by 25.11.2008, say

1.12.2008. However, the transmission asset was commissioned on 1.6.2012 after a time over-run of 42 months.

13. The petitioner has submitted that the reactor was taken back to the manufacturer works for rectification of manufacturing defects identified at site. After rectification of the defects, the reactor was successfully commissioned in May, 2012 and put under commercial operation with effect from 1.6.2012. The petitioner has also submitted that the asset is part of Kudankulam Transmission System which is linked to readiness of the generation of Kudankulam Generating Station. The Kudankulam Power Plant is yet to be commissioned. The instant transmission asset has been commissioned and declared under commercial operation with effect from 1.6.2012 and there is no time over-run in commissioning of the subject element.

14. The petitioner was directed to submit clarifications regarding delivery of reactor at site and detection of manufacturing defects. In response, the petitioner has submitted, vide affidavit dated 19.9.2012, that the reactor was supplied at Cochin Sub-station on 20.9.2009. Similar reactor was supplied at Udumalpet Sub-station and excessive vibrations were noticed in both the reactors during commissioning. Both the reactors were sent back to the manufacturer works for rectification on 1.12.2009 and were received after repairs on 26.4.2012 (after 29 months). After commissioning, the reactor was put into commercial operation with effect from 1.6.2012.

15. There is a delay of 42 months in commissioning of the asset. The time taken for rectification of manufacturing defects, 29 months, is a bilateral issue between vendor and petitioner, therefore, we are not inclined to condone time over-run of 29 months. The reactor is part of the transmission system for evacuation of Kudankulam APS, which was not commissioned till July, 2012. Because of the time over-run of remaining 13 months, there was no operational constraint in evacuation of power and hence time over-run of 13 months is condoned.

### **Treatment of IDC and IEDC**

16. The petitioner has submitted, vide affidavit dated 5.12.2012, that the IEDC and IDC for delayed period of 42 months are ₹21.91 lakh and ₹85.03 lakh. Hence, IDC and IEDC for 29 months have been proportionally deducted from the cost of transmission as on the date of commercial operation. The details of IDC and IEDC claimed and disallowed are as follows:-

(₹ in lakh)			
	IEDC	IDC	TOTAL
As per affidavit dated 05.12.2012 (For delay period of 42 months)	21.91	85.03	106.94
Total IDC and IEDC Claimed for the delay period (42 months)	<b>21.91</b>	<b>85.03</b>	<b>106.94</b>
<b>Detail of IEDC/IDC disallowed for months</b>			
PRO RATA IEDC/IDC Disallowed for 29 months	15.13	58.71	73.84
Total Disallowed	<b>15.13</b>	<b>58.71</b>	<b>73.84</b>



17. Accordingly, following capital cost up to date of commercial operation of the transmission asset has been considered for the purpose of tariff after deducting IEDC & IDC:-

(₹ in lakh)		
Capital cost considered for the purpose of tariff before adjustment of IEDC/IDC & initial spares as on DOCO	IEDC/IDC Disallowed	Capital cost considered for the purpose of tariff after adjustment of IEDC/IDC but before initial spares as on DOCO
625.98	73.84	552.14

### **Cost over-run**

18. The total estimated completion cost of the subject asset is ₹686.95 lakh against approved RCE of ₹698.00 lakh. Hence, there is no cost over-un. However, as per Form 5-B there is significant increase in cost of certain items like “Compensating Equipments (Reactor, SVCs etc)” by 84.76 %, “Control Relay & Protection Panel” by 85.71%, and “Erection” by 100%. The petitioner was directed to furnish reasons for such a significant increase in cost of these items.

19. In response, the petitioner has submitted, vide affidavit dated 19.9.2012, as under:-

- a) The award value of ₹8439 lakh shown in form 5-B is not only for the installation of reactor but includes the scope of supply of entire Cochin Sub-station including other reactor and ICTs at Cochin Sub-station. Due to inadvertent typographical error no. of bids received is shown as one in Form-5C which is incorrect. Actually, the number of bids received was six.

- b) **Compensation equipment (Reactor, SVCs, etc.):** As per original estimate, the cost of one 63 MVAR reactor was ₹223 lakh including taxes and duties, whereas actual awarded cost was ₹412 lakh including tax & duties, this actual cost also increased due to price variation clause by approx ₹43.35 lakh.
- c) **Control, Relay & protection Panel:** As per original estimate, the cost of control, Relay & protection panel was ₹7.00 lakh including taxes and duties, whereas the actual awarded cost as per LOA is ₹13.00 lakh including taxes and duties.
- d) **Erection:** As per original estimate, the cost of erection was ₹14.00 lakh including taxes and duties, whereas the cost as per LOA is ₹28.00 lakh including tax and duties.

20. In response to another query regarding reasons for approval of cost of RCE of ₹698 lakh when the FR cost was only ₹386 lakh, the petitioner has submitted, vide affidavit dated 19.9.2012, that there has been an increase of 16.76% of the approved cost of the project due to price variation. The contracts for various packages under this project were awarded to the lowest evaluated and responsive bidder, on the basis of competitive bidding. Thus, the award prices represent the lowest prices available at the time of bidding. Further, during the period from December, 2004 to March, 2010 there has been inflationary trend in the prices of various input items for the project.

21. The justification given by the petitioner for variation in cost is found to be in order and hence the cost variation is allowed.

## **Projected additional capital expenditure**

22. Clause (1) of Regulation 9 of the 2009 Tariff Regulations provides as follows:-

“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.”

23. Clause (11) of Regulation 3 of the 2009 Tariff Regulations defines “cut-off” date as under:-

“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 in case 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”.

Accordingly, the cut-off date for the instant transmission assets is 31.3.2015.

24. The petitioner has claimed the following additional capital expenditure:-

<b>(₹ in lakh)</b>			
Expenditure upto 31.3.2012	1.4.12 to 31.5.2012 DOCO	Projected for 1.6.2012 to 31.3.2013	Total
586.27	39.71	60.97	686.95

The additional capital expenditure claimed is for balance and retention payment and it is within the cut-off date and hence it is allowed.

## Debt- equity ratio

25. 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.”

26. Details of debt-equity in respect of the assets as on dates of commercial operation are given hereunder:-

(₹ in lakh)

<b>Capital cost as on date of commercial operation</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	386.50	70.00
Equity	165.64	30.00
<b>Total</b>	<b>552.14</b>	<b>100.00</b>

27. Detail of debt-equity ratio of assets as on 31.3.2014 is as follows:-

(₹ in lakh)

<b>Capital cost as on 31.3.2014</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	429.18	70.00
Equity	183.93	30.00
<b>Total</b>	<b>613.11</b>	<b>100.00</b>

### Return on equity

28. Regulation 15 of the 2009 Tariff Regulations provides as under:-

“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".

29. Based on the above, the return on equity considered is given hereunder:-

(₹ in lakh)		
Particulars	2012-13	2013-14
Opening Equity	165.64	183.93
Addition due to Additional Capitalisation	18.29	0.00
Closing Equity	183.93	183.93
Average Equity	174.79	183.93
Return on Equity (Base Rate )	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>25.46</b>	<b>32.15</b>

30. Return on equity has been computed as per Regulation 15 of the 2009 Tariff Regulations. Pre-tax return on equity of 17.481% has been considered. The petitioner's prayer for recovery of shortfall or refund of the excess Annual Fixed Charges, on account of return on equity due to change in applicable Minimum Alter/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly without making any application before the Commission shall be dealt under Regulation 15(5) of the 2009 Tariff Regulations.

### **Interest on loan**

31. Regulation 16 of the 2009 Tariff Regulations provides as under:-

“16. **Interest on loan capital** (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.”

32. In keeping with the provisions of Regulation 16 of the 2009 Tariff Regulations, the petitioner’s entitlement to interest on loan has been calculated on the following basis:-

(a) Gross amount of loan, repayment of instalments and 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.

33. The interest on loan has been calculated on the basis of prevailing rate available as on date of commercial operation. Any change in rate of interest subsequent to date of commercial operation will be considered at the time of truing up.

34. Detailed calculations in support of the weighted average rates of interest have been given in Annexure to this order.

35. Based on the above, interest on loan has been calculated as given hereunder:-

(₹ in lakh)

<b>Particulars</b>	<b>2012-13</b>	<b>2013-14</b>
Gross Normative Loan	386.50	429.18
Cumulative Repayment upto previous year	0.00	25.64
Net Loan-Opening	386.50	403.54
Addition due to additional capital expenditure	42.68	0.00
Repayment during the year	25.64	32.37
Net Loan-Closing	403.54	371.17
Average Loan	395.02	387.36
Weighted Average Rate of Interest on Loan	6.7821%	6.8501%
<b>Interest</b>	<b>22.33</b>	<b>26.53</b>



## **Depreciation**

36. Regulation 17 of the 2009 Tariff Regulations provides as follows:-

“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.”

37. Asset covered in the current petition was put under commercial operation as on 1.6.2012. Asset will complete 12 years beyond 2013-14. Accordingly, depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III of Tariff Regulation 2009-14, as per details given overleaf:-

(₹ in lakh)

Particulars	2012-13	2013-14
Opening Gross Block	552.14	613.11
Addition due to Projected Additional Capitalisation	60.97	0.00
Closing Gross Block	613.11	613.11
Average Gross Block	582.63	613.11
Rate of Depreciation	5.2800%	5.2800%
Depreciable Value	524.36	551.80
Remaining Depreciable Value	524.36	526.16
Depreciation	<b>25.64</b>	<b>32.37</b>
Cumulative Depreciation	25.64	58.01

38. Accordingly, depreciation has been worked out on the basis of capital expenditure as on the date of commercial operation and projected additional capital expenditure thereafter, wherein depreciation for the first year has been calculated on pro-rata basis for the part of year.

#### **Operation & maintenance expenses**

39. Clause (g) of Regulation 19 of the 2009 Tariff Regulations prescribes the norms for operation and maintenance expenses for the transmission system based on the type of sub-station and the transmission line. Norms prescribed in respect of the elements covered in the instant petition are as under:-

Element	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV bay (₹ lakh/bay)	52.40	55.40	58.57	61.92	65.46

40. As per the existing norms, allowable O&M expenses for the assets covered in this petition has been given overleaf:-

Element	2012-13 (Pro-rata for 10 months)	2013-14
1 no 400 kV bay	51.60	65.46
<b>Total O&amp;M</b>	<b>51.60</b>	<b>65.46</b>

41. The petitioner has stated that O&M expenditure for 2009-14 tariff block had been arrived on the basis of normalized actual O&M expenses of the petitioner during the year 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking was also considered while calculating the O&M charges for tariff period 2009-14. The petitioner has submitted that it would approach the Commission for suitable revision in the norms for O&M expenditure in case the impact of wage hike w.e.f 1.1.2007 is more than 50%.

42. We have already given effect to the impact of pay revision in the 2009 Tariff Regulations by factoring 50% on account of pay revision of the employees of PSUs after extensive stakeholders' consultation. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. However, in case the petitioner approaches with any such application, the same shall be dealt with in accordance with law.

#### **Interest on working capital**

43. The petitioner is entitled to claim interest on working capital as per the 2009 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder:-

### **(i) Receivables**

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables as a component of working capital will be equivalent to two months' of fixed cost. The petitioner has claimed the receivables on the basis of 2 months' of annual 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 as part of the working capital from 1.4.2009. The value of maintenance spares has accordingly been worked out.

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

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O&M expenses for 1 month of the respective year. This has been considered in the working capital.

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

In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and shall be equal to State Bank of India Base Rate of 10.00% plus 350 bps as on 1.4.2012 (13.50%). The interest on working

capital for the assets covered in the petition has been worked out accordingly.

44. Necessary computations in support of interest on working capital are given hereunder:-

(₹ in lakh)

Particulars	2012-13	2013-14
Maintenance Spares	9.29	9.82
O & M Expenses	5.16	5.46
Receivables	25.91	27.04
Total	40.36	42.31
Rate of Interest	13.50%	13.50%
Interest	<b>4.54</b>	<b>5.71</b>

### **Transmission charges**

45. The transmission charges being allowed for the assets are summarized below:-

(₹ in lakh)

Particulars	2012-13	2013-14
Depreciation	25.64	32.37
Interest on Loan	22.33	26.53
Return on Equity	25.46	32.15
Interest on Working Capital	4.54	5.71
O & M Expenses	51.60	65.46
<b>Total</b>	<b>129.56</b>	<b>162.23</b>

### **Filing fee and the publication expenses**

46. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. In accordance with the Commission's order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee directly from the beneficiaries on *pro-rata* basis. The

petitioner shall also be entitled for reimbursement of the publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis.

### **Licence fee**

47. 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**

48. 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.. We consider petitioner's prayer premature and accordingly this prayer is rejected.

### **Sharing of Transmission Charges**

49. 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.

50. This order disposes of Petition No. 195/TT/2012.

sd/-

**(M. Deena Dayalan)**  
**Member**

sd/-

**(V. S. Verma)**  
**Member**



**Annexure****CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN  
(₹ in lakh)**

	<b>Details of Loan</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>ADB-III (Exchange Rate Rs.56.32)</b>		
	Gross loan opening	137.98	<b>137.98</b>
	Cumulative Repayment upto DOCO/previous year	11.26	<b>16.70</b>
	Net Loan-Opening	126.72	121.28
	Additions during the year	0.00	0.00
	Repayment during the year	5.44	5.99
	Net Loan-Closing	121.28	115.29
	Average Loan	124.00	118.29
	Rate of Interest	1.80%	1.80%
	Interest	<b>2.24</b>	<b>2.13</b>
	Rep Schedule	30 HY installments from 15.01.2010	
<b>2</b>	<b>Bond XXXIV</b>		
	Gross loan opening	300.00	<b>300.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>
	Net Loan-Opening	300.00	300.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	300.00	300.00
	Average Loan	300.00	300.00
	Rate of Interest	8.84%	8.84%
	Interest	26.52	26.52
	Rep Schedule	12 annual installments from 21.10.2014	
	<b>Total Loan</b>		
	Gross loan opening	437.98	437.98
	Cumulative Repayment upto DOCO/previous year	11.26	16.70
	Net Loan-Opening	426.72	421.28
	Additions during the year	0.00	0.00
	Repayment during the year	5.44	5.99
	Net Loan-Closing	421.28	415.29
	Average Loan	424.00	418.29
	Rate of Interest	<b>6.7821%</b>	<b>6.8501%</b>
	<b>Interest</b>	28.76	28.65