CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 34/TT/2014

Coram:

Shri A.S. Bakshi, Member
Dr. M.K. Iyer, Member

Date of Hearing : 16.11.2015
Date of Order : 31.12.2015

In the matter of:

Determination of transmission tariff for 2009-14 tariff period for (a) Asset I: Balance portion of 400 kV D/C Jamshedpur-Baripada Transmission Line and associated bays at Jamshedpur, (b) Asset II: 02 Nos. 400 kV bays at Durgapur Sub-station under ERSS-I in Eastern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2009.

And in the matter of:

Power Grid Corporation of India Ltd.
'SAUDAMINI', Plot No-2,
Sector-29, Gurgaon -122 001 (Haryana). ………**Petitioner**

Versus

1. Bihar State Electricity Board
Vidyut Bhawan, Bailey Road
Patna- 800001

2. West Bengal State Electricity Distribution Company Limited
Bidyut Bhawan, Bidhan Nagar,
Salt Lake City, Kolkata-700091

3. Grid Corporation of Orissa Ltd.
Shahid Nagar,
Bhubaneshwar- 751007

4. Damodar Valley Corporation
   DVC Tower, Maniktala
   Civic Centre, VIP Road,
   Kolkata-700054

5. Power Department
   Govt of Sikkim,
   Gangtok-737101

6. Jharkhand State Electricity Board
   Doranda, Ranchi-834002 **……….Respondents**

The following were present:-

For Petitioner: Shri S.K. Niranjan, PGCIL
Shri Rakesh Prasad, PGCIL
Shri A.K. Verma, PGCIL
Shri M.M. Mondal, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri Shashi Bhushan, PGCIL
Shri Ved Prakash Rastogi, PGCIL

For Respondent: None

ORDER

The present petition has been preferred by Power Grid Corporation of India Ltd. ("the petitioner"), a transmission licensee, for determination of transmission tariff for (a) Asset-I: Balance portion of 400 kV D/C Jamshedpur-Baripada Transmission Line and associated bays at Jamshedpur and (b) Asset-II: 2 Nos. 400 kV bays at Durgapur Sub-station (hereinafter referred as "transmission asset") under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations") based on actual capital expenditure for the tariff period 2009-14.

2. The respondents are mostly distribution licensees who are procuring transmission service from the petitioner, mainly beneficiaries of Eastern Region.

3. The petitioner has served the petition to the respondents and notice of this application has been published in the newspaper in accordance with the Section 64 of Electricity Act, 2003 ("the Act"). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. None of the respondents have filed any reply to the petition. The hearing in this matter was held on 16.11.2015. The Commission during the hearing observed that in case no information is filed within the due date, the matter shall be considered based on the available records. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

4. The brief facts of the case are as follows:-

(a) The investment approval for the implementation of Eastern Region Strengthening Scheme-I (ERSS-I) in Eastern Region was accorded by Ministry of Power, Govt. of India vide its letter No. 12/4/2005- PG dated 4.10.2006 at an estimated cost of ₹ 97596 lakh. The petitioner has built the transmission asset in the Eastern Region as a part of ERSS-I. During the 116th EREB meeting held on 15.11.2005, it was discussed and agreed to make it a part of main Bulk Power Transmission Agreement (BPTA) of Eastern Region.

(b) The scope of work covered under the project is as follows:-

Transmission Lines:

i) 400 kV D/C Durgapur-Jamshedpur line
i) 400 kV D/C Jamshedpur-Baripada Line
ii) 400 kV D/C Baripada-Chandaka (Mendhasal) (GRIDCO) line
iii) 400 kV D/C Re-conductoring of Silliguri- Purnea line with twin INVAR Moose conductor

Sub-stations:

i) 400/220 kV Jamshedpur Sub-station extension
ii) 400/220 kV Durgapur Sub-station extension
iii) 400/220/132 kV Baripada Sub-station Extension

iv) 400/220 kV Siliguri Sub-station Extension v) 400/220 kV Purnea Sub-station Extension vi) 400/220 KV Chandaka (Mendhasal) Sub-station Extension (Gridco)	Re-conductoring of 400 KV bays including dismantling and replacement of equipment and associated works

(c) As per the investment approval dated 4.10.2006, the transmission asset was scheduled to be commissioned within 36 months from the date of investment approval, i.e., by 1.11.2009. Asset-I (Balance portion of 400 kV D/C Jamshedpur- Baripada line) was put under commercial operation w.e.f. 1.10.2013 and Asset-II (2 nos. of 400 kV Bays at Durgapur Sub-station) was put under commercial operation w.e.f 1.2.2014.

(d) The tariff from COD to 2013-14 for the following assets were approved by the Commission in the following orders:-

- LILO connectivity to DVC's Andal TPS through 400 kV D/C Durgapur Jamshedpur transmission line associated with transmission system was allowed vide order dated 24.2.2012 in Petition No. 30/TT/2011.

- 400kV Baripada--Chandaka (Mendhasal) (GRIDCO) line was allowed vide order dated 12.10.2012 in Petition No. 112/TT/2011.

- Combined elements of 400 kV D/C Baripada-Chandaka (Mendhasal) (GRIDCO) line and 400 kV D/C Jamshedpur- Baripada line and associated bays was allowed vide order dated 9.5.2013 in Petition No. 150/TT/2011.

- 400 kV D/C Andal (DVC)- Jamshedpur section of Durgapur Jamshedpur transmission line and associated bays at Jamshedpur Sub-station was allowed vide order dated 21.2.2014 in Petition No. 185/TT/2011.

(e) The petitioner has filed this instant petition on 21.2.2014 for the balance portion of assets..

(f) In response to letter dated 6.11.2015, the petitioner has submitted its replies vide affidavit dated 13.11.2015 and 19.11.2015.

(g) The Commission vide its letter dated 6.11.2015 sought how the 2 numbers of 400 kV line bays at Durgapur (PG) are being utilized, to which the petitioner replied that it is ready for use and will be utilized for future line, and requested the Commission to approve the COD and transmission tariff of the Asset-II in accordance with Regulation 3 (12) of the 2009 Tariff Regulations.

(h) It is observed that the petitioner has claimed commissioning of the bays prior to commissioning of line for which it shall be used. The petitioner has not submitted any details of line for which the two numbers of bays will be utilized. The petitioner vide affidavit dated 13.11.2015 submitted that in the ERPC meeting it was decided and agreed to allow the petitioner to declare two numbers of bays at Durgapur under ERSS-I as an asset of Eastern Region. However, the Commission observed that in the 24th ERPC minutes of meeting the Members have only noted the same and also in 26th ERPC meeting it was held that members may discuss and decide the same. Further, the Commission observed that similar case has been dealt in order dated 15.12.2015 in Petition No. 33/TT/2013 wherein the Commission has not approved the COD of two bays at Fatehpur and one bay at Agra claimed by the petitioner as there was difference in COD of bays and associated transmission line. The COD of bays was prior to COD of associated transmission line. The Commission approved the COD of bay on the same date as COD of the transmission line. Hence we are not inclined to approve COD and transmission tariff of Asset-II (2 nos. of 400 kV Bays at Durgapur Sub-station).

ANNUAL FIXED CHARGES FOR TARIFF PERIOD 2009-14

5. The petitioner has claimed the revised transmission charges as under:-

(₹ in lakh)

Particulars	2013-14 (Pro rata)
	Asset-I
Depreciation	157.69
Interest on Loan	34.13
Return on equity	173.81
Interest on Working Capital	12.45
O & M Expenses	78.26
Total	**456.34**

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

(₹ in lakh)

Particulars	2013-14 (Pro rata)
	Asset-I
Maintenance Spares	13.04
O & M expenses	23.48
Receivables	152.11
Total	188.63
Rate of Interest (%)	13.20
Interest	**12.45**

Capital Cost

7. Regulation 7 of the 2009 Tariff Regulations specifies 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."

8. The petitioner in its petition has submitted the apportioned approved cost, actual expenditure incurred as on the date of commercial operation and additional capital expenditure incurred/projected to be incurred for the assets. The petitioner vide letter dated 6.11.2015 was directed to provide the break-up of total estimated completed cost for Asset-I into sub-station and transmission line. The petitioner, vide its affidavit dated 13.11.2015 revised its estimate of additional capitalization till cut-off date and submitted updated Auditor's Certificate towards completion cost. The completion cost was revised for the Asset-I from ₹6178.80 lakh to ₹6213.25 lakh. The petitioner has also revised the phasing of additional capitalisation. The revised completion cost for Asset-I as claimed by the petitioner is as shown in the table below:-

(₹ in lakh)

Asset	Approved apportioned cost	Expenditure upto COD claimed	Actual additional capitalization from COD to 31.3.2014 claimed	Total capital cost claimed as on 31.3.2014
Asset-I	4607.19	5909.05	123.85	6032.90

9. The petitioner has submitted proposed additional capital expenditure for 2014-15 and 2015-16 which is not considered for 2009-14 tariff period.

Cost over-run

10. The total estimated completion cost of the transmission asset is ₹6213.25 lakh, as against the apportioned approved cost of ₹4607.19 lakh for Asset-I resulting in a cost over-run of ₹1571.61 lakh.

11. As there was significant increase in the completion cost of the instant assets, the petitioner was directed vide letter dated 6.11.2015 to submit the justification for increase in the completion cost of the instant assets.

12. The petitioner has submitted vide affidavit dated 13.11.2015 activity-wise cost variation for both the assets, which is as summarised below:-

Asset-I:

- Design and Engg. (Increase of 373%): The cost has increased from ₹3.51 lakh to ₹16.6 lakh on account of cost towards preliminary survey and route alignment of the line and the same has been arrived at after awarding the contract for the work after following due process for tendering.

- Preliminary investigation, ROW, Forest Clearance, PTCC, general civil works, etc. (Increase of 276.5%): The cost has increased from ₹84.62 lakh to ₹318.61 lakh on account of actual/anticipated compensation as offered by District authorities and Forest department.

- Tower Steel (Increase of 37.8%): The rate of tower steel increased from ₹0.6487 lakh/MT to ₹0.6631 lakh/MT and the line length has increased from 135 km to 141 km and the number of tension towers has also increased from 90 to 152 for the total Jamshedpur Baripada line.
- Earth wire (Increase of 85%): Cost of earth wire increased due to increase in line length from 135 km to 141 km and also due to increase in awarded cost from ₹0.3057 lakh/km to ₹0.52448 lakh/km.
- Insulators (Increase of 15.55%): Cost of insulators increased due to increase in line length from 135 km to 141 km.
- Hardware Fittings (Increase of 37%): Cost of hardware fittingsincreased due to increase in line length from 135 km to 141 km.
- Foundation for structure and Misc. Civil works (Increase of 206.8%): The existing 220 kV line connecting between Jamshedpur Sub-station (PG) and Ramchandra Sub-station (JSEB) was required to be diverted through gantry as there was a space constraint to accommodate the bays at Jamshedpur Sub-station. The civil and structure works associated with the diversion was not considered at FR stage, hence, there is an increase in foundation for structure and miscellaneous civil works.

- Switchgear (CT, PT, CB, Isolators, etc.) (Increase of 70%): Cost of the switch gear increased due to higher Letter of Award (LOA) rate.

13. The Commission observes that the reason for cost variation in case of Asset-I as submitted by the petitioner is mainly due to increase in total line length from an estimated 135 km as per FR to 141 km in actual, associated increase in number of tension towers, higher actual compensation as offered by District authorities, diversion of line, and higher LOA value, discovered through competitive bidding. The Commission vide its letter dated 6.11.2015 sought clarification on whether the Board of the Company has agreed for cost overrun and directed to furnish minutes of the meeting, if any, in support. The petitioner in response submitted that the revised cost estimate (RCE) of the project is under advanced stage of preparation/approval and the documents for the same shall be submitted upon the approval of the competent authority.

14. The petitioner has claimed capital cost of ₹5909.05 lakh for Asset-I as on COD vide Auditor's Certificate, which exceeds the apportioned approved cost by ₹1301.86 lakh. As discussed above, the revised cost estimate for the project is yet to be approved by the Board of the Company, and therefore the Commission at this stage has limited the capital cost as on COD of the Asset-I as ₹4607.19 lakh on the basis of investment approval. However, liberty is granted to the petitioner to come up with the RCE with appropriate justification for cost over-run at the time of truing up for the Commission's consideration. The Commission will carry out the prudence check of cost over-run at the time of truing up.

Time over-run

15. As per the original investment approval dated 4.10.2006, the instant assets were to be commissioned within 36 months from the date of investment approval. Accordingly, the scheduled COD comes out to 1.11.2009. Asset-I was commissioned on 1.10.2013. There is time over-run of 47 months in case of Asset-I as shown below:-

Asset	Scheduled as per FR	Actual COD	Delay
Asset-I: Balance portion of 400 kV D/C Jamshedpur-Baripada Transmission Line and associated bays at Jamshedpur*	1.11.2009 (36 months from the date of Investment approval, i.e., 4.10.2006)	1.10.2013	47 months

* Part of Asset I covered as 400 kV D/C Baripada - Jamshedpur(DVC) TL (part of 400 kV D/C Jamshedpur- Baripada TL) & associated bays at Baripada Sub-station under ERSS-I in Petition No. 150/TT/2011.

16. The petitioner in its petition and vide its affidavits dated 13.11.2015 and 19.11.2015 has submitted the reasons for time over-run as follows:-

Asset-I

Delay in Forest clearance

17. The petitioner has submitted that some portion of line was proposed to pass through forest area in the States of Jharkhand and Orissa. The forest proposals were submitted to the Nodal Officer, Jharkhand on 24.8.2006 and Nodal Officer, Orissa on 4.9.2006. The subsequent processing and clearance in

the State of Jharkhand and Orissa took considerable time, as evident from the details given below:-

State	Submission	Stage-I clearance	Stage-II clearance	Stage-III clearance
Jharkhand	24.8.2006	20.2.2009	12.10.2009	31.12.2009
Orissa	4.9.2006	2.12.2008	17.4.2009	N.A

18. The petitioner has also submitted the supporting documents for the above delay along with the petition.

ROW Problems

19. The petitioner submitted that there was an acute ROW problem initially in respect of around 60 locations where work was stopped by villagers/ local people and work was not allowed to be undertaken. The matter was repeatedly taken up by petitioner at local DM/DC level and also at State level. The matters were brought to the notice of ERPC and Ministry of Power (MOP) level also. For most of such locations, works could be executed with the help of local administration and police force (mostly during President's rule in the State of Jharkhand). However, due to various socio-political issues, despite the best efforts put in, very little progress could be made as the extent of such support was also very limited. The petitioner has further submitted that it was not allowed to take up work even in the petitioner’s Sub-station area where land is illegally occupied by villagers. Further, on the request of DVC, an interim arrangement for terminating Baripada-Jamshedpur line at DVC's new Sub-station at Tata Steel plant was worked out and with this arrangement, 108 km of Baripada-Jamshedpur line and bays at Baripada Sub-station could be commissioned on 1.6.2012.

20. The petitioner has further submitted that delay of 31 months upto 1.6.2012 from scheduled COD i.e. 1.11.2009 was condoned by the Commission in Petition No. 150/TT/2011 on merits, as the same was beyond the control of the petitioner. Subsequent to this, vigorous follow up with the local, district and State level machinery was continued to complete the remaining portion of the line, which involved 12 locations near Jamshedpur where acute ROW problem was encountered. With support from administration and association of ERPC, MoP and other higher offices, work at these locations could be completed. Since, the area was highly sensitive, it was not advisable to mobilize the team at all the remaining locations at one time. As such, the work was taken up at one location at a time. With such an approach, all the ROW issues near Jamshedpur end could be amicably resolved by May/June 2013. Amidst the full blown monsoon with careful mobilization, the work on remaining portion could be completed by September, 2013.

21. The Commission has considered the submissions of petitioner. The Commission is of the view that the time overrun should be considered with reference to the time-line approved in the original Investment Approval. Time over-run beyond this period needs to be considered in the light of the principles laid down by the Appellate Tribunal for Electricity in the Judgment dated 5.5.2015 in Appeal No. 129 of 2014. It is observed that time over-run is due to delay in forest clearance and ROW problem and the same cannot be attributed to the petitioner. It is to be noted that out of total delay of 47 months for Asset-I, delay

of 31 months for a portion of Asset-I i.e. from 1.11.2009 to 1.6.2012 has already been condoned by the Commission vide order dated 9.5.2013 in Petition No. 150/TT/2011. Further the delay of 16 months i.e. from 2.6.2012 to 1.10.2013 is allowed in this order as it was basically due to ROW problem and delay in forest clearance. As the delay is on account of several unaccountable factors, total time over-run of 47 months is condoned for Asset-I.

Initial Spares

22. Regulation 8 of the 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 Series compensation devices:	2.5%
& HVDC Station:	3.5%"

23. The petitioner has claimed initial spares pertaining to Sub-station and transmission line, which is higher than the percentage specified in Regulation 8 of the 2009 Tariff Regulations. The petitioner has claimed initial spares of ₹28.80 lakh (1.65%) of the Sub-station cost of ₹1742.19 lakh and ₹40.00 lakh (0.90%) of the transmission line cost of ₹4424.59 lakh for Asset-I. However, in response to Commission's query through letter dated 6.11.2015, the petitioner has submitted revised Auditor Certificate dated 10.11.2015 wherein the petitioner has revised the cost of Sub-station to ₹1776.64 lakh keeping the amount of initial spares same as ₹28.80 lakh for Asset-I. The % initial spares have reduced from 1.65%

to 1.62% considering the revised cost of Sub-station. The initial spares for transmission line claimed by the petitioner is ₹40.00 lakh which is 0.90% of transmission line cost of ₹4424.59 lakh in the petition as well as in revised Auditor's Certificate dated 10.11.2015 for Asset-I. Further, petitioner has submitted that this asset is a part of larger transmission scheme containing many such assets and may not be seen in isolation and be seen in totality of transmission scheme while filing for the complete asset. The capital cost including initial spares claimed by the petitioner for Asset-I have been restricted to apportioned approved cost as discussed above. We are of the view that when the tariff is being determined for each asset separately, norms of initial spares needs to be applied for each asset separately. Hence, the initial spares have been considered as per ceiling norms specified in Regulation 8 of the 2009 Tariff Regulations. The details of initial spares claimed by the petitioner and allowed are shown in table below:-

(₹ in lakh)

Particulars	Capital cost claimed	Initial Spares Claimed	Capital Cost allowed	Initial spares			
				Proportionate Initial Spares	Ceiling limit (%)	Admissible as per Ceiling limit	Allowed
Asset-I (Transmission line)	4424.59	40.00	3336.32	30.16	0.75	25.02	25.02
Asset-I (Sub-station)	1784.52	28.80	1270.87	21.47	2.50	31.23	21.47

Additional Capital Expenditure

24. 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:"

25. Further, the 2009 Tariff Regulations define cut-off date as:-

> "cut-off date means 31st March of the year closing after 2 years of the year of commercial operation of the project, and in case of the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after 3 years of the year of commercial operation".

26. Accordingly, the cut-off date for Asset-I is 31.3.2016. The petitioner in its petition has submitted the apportioned approved cost, actual expenditure incurred as on the date of commercial operation and additional capital expenditure incurred/projected to be incurred for the assets. The Commission vide its letter dated 6.11.2015 sought the break-up of total estimated completed cost for Asset-I into sub-station and transmission line. The petitioner in reply to the above query vide affidavit dated 13.11.2015, revised its estimate of additional capitalization till cut-off date and submitted updated Auditor's Certificate towards completion cost. The completion cost was revised for the Asset-I from ₹6178.80

lakh to ₹6213.25 lakh. The petitioner has also revised the phasing of additional capitalisation. The petitioner has claimed total projected additional capitalization of ₹123.85 lakh, ₹126.40 lakh and ₹53.95 lakh for 2013-14, 2014-15 and 2015-16 against transmission line and Sub-station for Asset-I. Since completion cost has been restricted upto approved cost projected additional capital expenditure has not been considered for Asset-I and the total capital cost is limited to apportioned approved cost.

27. The tariff for 2009-14 tariff period has been determined as discussed below.

Debt:Equity Ratio

28. 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."

29. The Commission vide its letter dated 6.11.2015 sought clarification regarding the 30% notional equity considered for capital cost as on COD and for the additional capitalization, and also directed the petitioner to submit an undertaking that the actual equity is infused for the works carried out as on COD and additional capitalization carried out in tariff period 2009-14. In response to this query, the petitioner submitted revised debt:equity ratio for Asset-I for 2013-14 against additional capitalization. The petitioner has submitted that additional capitalization of ₹123.85 lakh for 2013-14 is funded through loan and no equity contribution for Asset-I.

30. We have considered the approved capital cost as on COD for the tariff period 2009-14 for Asset-I. As there is no additional capitalization allowed for Asset-I, debt:equity ratio will be same as on COD and as on 31.3.2014. The details of the debt:equity in respect of the asset as on the date of COD and as on 31.3.2014 is shown in Table below:-

	Asset-I	
Particulars	Amount (in ₹lakh) as on COD	(%)
Debt	3225.03	70
Equity	1382.16	30
Total	**4607.19**	**100**

Interest on Loan ("IOL")

31. 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."

32. In view of provisions of the 2009 Tariff Regulations, interest on loan has been considered for Asset-I as detailed hereinafter:-

(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 have been considered as equal to the depreciation allowed for that period;

(d) 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.

(e) As per Regulation 16(5) only actual loans have been considered for computation of weighted average rate of interest.

33. The petitioner has prayed to be allowed to bill and adjust impact of interest on loan due to change in interest rate on account of floating rate of interest applicable, if any, during the tariff period 2009-14, from the respondents. The interest on loan has been calculated on the basis of prevailing rate of actual loan available 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.

34. Detailed calculation of the weighted average rate of interest for Asset-I has been given at Annexure to this order.

(₹ in lakh)

Particulars	2013-14 (Pro rata)
	Asset-I
COD	1.10.2013
Number of days considered for computation	182
Gross loan opening as on COD	3225.03
Cumulative Repayment upto COD	0.00
Net Loan-Opening as on COD	3225.03
Additions during the year	0.00
Repayment during the year	121.34
Net Loan-Closing	3103.69
Average Loan for the year	3164.36
Rate of Interest (%) for the year	1.6751
Interest	26.43

<u>Return on Equity (“ROE”)</u>

35. 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".

36. The petitioner in the petition has computed ROE at the rate of 17.481% after grossing up the ROE with MAT rate as per the above Regulation. Further, in response to letter dated 6.11.2015, the petitioner has computed ROE at the rate of 19.61 % after grossing up the ROE with MAT rate. The petitioner has further submitted that the grossed up ROE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2009-14 on actual gross income of any financial year. Any under-recovery or over-recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

37. The petitioner has further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of the tax including

interest received from IT authorities shall be recoverable/adjustable after completion of income tax assessment of the financial year.

38. Above Regulation provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2008-09 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 15 (4) (i) of the 2009 Tariff Regulations. Accordingly, the ROE determined by the Commission is shown in the table below:-

(₹ in lakh)

Particulars	2013-14 (Pro rata)
	Asset-I
COD	1.10.2013
Number of days considered for computation	182
Opening Equity as on COD	1382.16
Additional Capitalization after COD	0.00
Closing Equity	1382.16
Average Equity for the year	1382.16
Return on Equity (Base Rate) (%) for the year	15.50
MAT rate for the year (%)	11.330
Rate of Return on Equity (Pre Tax) (%)	17.481
Return on Equity (Pre Tax)	**120.48**

Depreciation

39. 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."

40. The instant asset has been put under commercial operation during 2013-14. Accordingly, assets will complete 12 years beyond 2013-14. Thus, depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III of the 2009 Tariff Regulations. Details of the depreciation worked out for Asset-I are as follows:-

(₹ in lakh)

Particulars	2013-14 (Pro rata)
	Asset-I
COD	1.10.2013
Number of days considered for computation	182
Gross block as on COD	4607.19
Additional Capitalization after COD	0.00
Gross block at the end of the year	4607.19
Average gross block for the year	4607.19
Rate of Depreciation (%) for the year	5.282
Depreciable Value	4146.47
Elapsed Life at the beginning of the year	0
Weighted Balance Useful life of the assets	32
Remaining Depreciable Value	4146.47
Depreciation	**121.34**

Operation & Maintenance Expenses ("O&M Expenses")

41. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies norms for O&M Expenses for transmission system based on type of Sub-stations and the transmission line. Norms specified in respect of O&M Expenses for transmission asset covered in the instant petition are as hereinafter:-

(₹ in lakh)

Particulars	2013-14 (Pro rata)
	Asset-I
O&M Expenses for Lines	
Norm (₹ lakh/km)	
Double Circuit (Twin & Triple Conductor)	0.783
Asset (km)	
400 kV	32.706
Total O&M Expense (lines) (₹ lakh)	
400 kV	12.77
O&M Expenses for Bays	
Norm (₹ lakh/Bay)	
400 kV	65.46
Bays	
400 kV	2
Total O&M expense (Bay) (₹ lakh)	65.28
Total O&M Expenses (lines and bays) (₹ lakh)	**78.05**

42. The petitioner has submitted that norms for O&M Expenses for the year 2009-14 had been arrived at on the basis of normalized actual O&M Expenses during the period 2003-04 to 2007-08 and by escalating it by 5.72% per annum for arriving at norms for the years of tariff period. 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 may approach the Commission for suitable revision in norms for O&M Expenses due to impact of wage revision.

43. 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 allowed O&M Expenses as per the existing norms.

44. The details of O&M Expenses allowed are given hereunder:-

(₹ in lakh)

Particulars	2013-14 (Pro rata)
	Asset-I
O&M Expenses Allowed	78.05

Interest on Working Capital ("IWC")

45. Sub-clause (c) of Clause (1) of Regulation 18 of the 2009 Tariff Regulations provides the components of the working capital for the transmission system and Clause (3) of Regulation 18 of the 2009 Tariff Regulations provides for the rate of interest of working capital.

46. The petitioner has submitted that the rate of interest on working capital has been considered as 13.20% as per Clause (3) of Regulation 18 of the 2009 Tariff Regulations and the components of working capital are also considered in accordance with Sub-clause (c) of Clause (1) of Regulation 18 of the 2009 Regulations.

47. 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 in case of transmission assets declared under commercial operation after 1.7.2010 shall be equal to SBI Base Rate plus 350 basis points as on 1st April of the year in which the transmission asset was declared under commercial operation. State Bank of India base Bate as on 1.4.2013 was 9.70%. Therefore, interest rate of 13.20% has been considered to work out the interest on working capital in the instant case.

48. Computations in support of interest on working capital allowed are as follows:-

(₹ in lakh)

Particulars	2013-14 (Pro rata)
	Asset-I
Maintenance Spares	23.48
O & M expenses	13.04
Receivables	119.17
Total	155.70
Rate of Interest (%)	13.20
Interest	**10.25**

Annual Transmission Charges

49. The detailed computation of the various components of the annual fixed charges for the transmission asset for the tariff period 2009-14 is summarised below:-

(₹ in lakh)

Particulars	2013-14 (Pro rata)
	Asset-I
COD	1.10.2013
Number of days considered for computation	182
Gross Block	
Opening Gross Block as on COD	4607.19
Additional Capitalization after COD	0.00
Closing Gross Block	4607.19
Average Gross Block for the year	4607.19
Depreciation	
Rate of Depreciation (%) for a year	5.282
Depreciable Value	4146.47
Elapsed Life at the beginning of the year	0
Weighted Balance Useful life of the assets	32
Remaining Depreciable Value	4146.47
Depreciation for the year	121.34
Cumulative Depreciation	121.34
Interest on Loan	
Gross Normative Loan as on COD	3225.03
Cumulative Repayment upto COD	0.00
Net Loan-Opening upto COD	3225.03

Particulars	2013-14 (Pro rata)
	Asset-I
Additional Capitalization after COD	0.00
Repayment during the year	121.34
Net Loan-Closing	3103.69
Average Loan for the year	3164.36
Weighted Average Rate of Interest on Loan(%)	1.6751
Interest	26.43
Return on Equity	
Opening Equity as on COD	1382.16
Additional Capitalization after COD	0.00
Closing Equity	1382.16
Average Equity for the year	1382.16
Return on Equity (Base Rate) (%)	15.50
MAT rate for the respective year (%)	11.330
Rate of Return on Equity (%)	17.481
Return on Equity	120.48
Interest on Working Capital	
Maintenance Spares	23.48
O & M expenses	13.04
Receivables	119.17
Total	155.70
Interest	10.25
Annual Transmission Charges	
Depreciation	121.34
Interest on Loan	26.43
Return on Equity	120.48
Interest on Working Capital	10.25
O & M Expenses	78.05
Total	**356.55**

Filing Fee and the Publication Expenses

50. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 42 of the 2009 Tariff Regulations. 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

51. The petitioner has requested to allow the petitioner to bill and recover Licence fee separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee in accordance with Clause (1)(b) of Regulation 42 A of the 2009 Tariff Regulations.

Service Tax

52. The petitioner has sought to recover Service Tax on Transmission Charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list in future. We are of the view that the petitioner's prayer is premature.

Sharing of Transmission Charges

53. 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.

54. This order disposes of Petition No. 34/TT/2014.

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

-// ANNEXURE-I //-

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO **(₹ in lakh)**

Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Repayment during the year	Total
ADB III	1.83	125.99	0.00	2.8	123.19
IBRD IV	1.69	143.85	0.00	3.18	140.67
IBRD-IV ADDL	1.67	3866.50	0.00	66.12	3800.38
Total		4136.34	0.00	72.10	4064.24

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR TARIFF PERIOD 2013-14 FOR ASSET-I **(₹ in lakh)**

Details of Loan	Asset-I
	2013-14
Total Loan	
Gross Opening Loan	4136.34
Cumulative Repayment of loan upto previous year	149.19
Net Loan Opening	3987.14
Additions during the year	0.00
Repayment during the year	72.10
Net Loan Closing	3915.04
Average Loan	3951.09
Interest	66.19
Weighted Average Rate of Interest (%)	1.6751