

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 54/TT/2013

Coram:

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

Date of Hearing : 24.06.2014

Date of Order : 10.08.2015

In the matter of:

Determination of transmission tariff for 125 MVAR Bus Reactor at Manesar associated with Northern Region System Strengthening Scheme-XIII of Northern 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
"Saudamani", Plot No.2,
Sector-29, Gurgaon -122 001

.....**Petitioner**

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,
Vidyut Bhawan, Vidyut Marg,
Jaipur- 302 005
2. Ajmer Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur
3. Jaipur Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur
4. Jodhpur Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur
5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171 004



6. Punjab State Electricity Board
The Mall, Patiala-147 001
7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula (Haryana)-134 109
8. Power Development Department,
Govt. of Jammu and Kashmir,
Mini Secretariat, Jammu
9. UP Power Corporation Ltd.,
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226 001
10. Delhi Transco Ltd.,
Shakti Sadan, Kotla Road,
New Delhi-110 002
11. BSES Yamuna Power Ltd.,
BSES Bhawan, Nehru Place,
New Delhi
12. BSES Rajdhani Power Ltd.,
BSES Bhawan, Nehru Place,
New Delhi
13. North Delhi Power Ltd.,
Power Trading & Load Dispatch Group,
Cennet Building, Adjacent to 66/11kV Pitampura-3,
Grid Building, Near PP Jewellers,
Pitampura, New Delhi-110 034
14. Chandigarh Administration,
Sector-9, Chandigarh
15. Uttarakhand Power Corporation Ltd.,
Urja Bhawan, Kanwali Road,
Dehradun
16. North Central Railway,
Allahabad.
17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi-110 002

....Respondents

For petitioner : Shri S.S Raju, PGCIL
Ms. Seema Gupta, PGCIL
Shri S.K. Venkatesan, PGCIL
Ms. Sangeeta Edwards, PGCIL

For respondent : Shri R.B Sharma, Advocate, BRPL
Shri Padamjit Singh, PSPCL

ORDER

The petition has been filed by Power Grid Corporation of India Limited (PGCIL) for approval of the transmission tariff for 125 MVAR Bus Reactor at Manesar (hereinafter referred to as “transmission assets”) associated with Northern Region System Strengthening-XIII (NRSS-XIII) of Northern Region for tariff block 2009-14 period, in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter “the 2009 Tariff Regulations”).

2. The investment approval for the transmission project was accorded by Board of Directors of the petitioner vide letter dated 16.2.2009 at an estimated cost of ₹31769 lakh, including IDC of ₹2432 lakh (based on 4th quarter, 2008 price level), for completion within 33 months from the date of investment approval, i.e. by 1.12.2011. The scope of work covered under the project is as follows:-

Transmission Lines

- (i) Gurgaon (POWERGRID)-Manesar 400 kV (Quad) line-18 km
- (ii) Delinking Agra- Samaypur and Samaypur- Gurgaon (POWERGRID) 400 kV lines from Samaypur and making a direct 400 kV S/C line from Agra to Gurgaon (POWERGRID) - 1.5 km

Sub-station

- (i) Manesar 400/220 kV (POWERGRID) GIS Sub-station (New)- 2x500 MVA, 400/220 kV Transformers
- (ii) Gurgaon 400/220 kV (POWERGRID) GIS Sub-station (Extension)
- (iii) Fatehabad 400/220 kV (POWERGRID) Sub-station (Extension)



Reactive Compensation

| | Line Reactor-From Bus | Line Reactor-To Bus |
|---|---|--|
| Delinking of Agra-Samaypur and Samaypur-Gurgaon (POWERGRID) 400 kV lines from Samaypur and making a direct 400 kV S/C circuit line from Agra to Gurgaon (POWERGRID) | 50 MVAR Switchable line reactor (at Agra) | 50 MVAR Switchable line reactor at Ballabgarh end of Agra-Ballabgarh line to be made switchable bus reactor on the vacated bay |
| 125 MVAR Bus Reactor at Manesar | | |

3. The transmission charges claimed by the petitioner are as under:-

(₹ in lakh)

| Particulars | 2012-13 (Pro-rata) | 2013-14 |
|-----------------------------|-----------------------|---------|
| Depreciation | 45.75 | 101.80 |
| Interest on Loan | 58.29 | 123.41 |
| Return on Equity | 47.95 | 106.92 |
| Interest on working capital | 5.21 | 11.26 |
| O & M Expenses | 30.96 | 65.46 |
| Total | 188.16 | 408.85 |

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

(₹ in lakh)

| Particulars | 2012-13 (Pro-rata) | 2013-14 |
|--------------------|-----------------------|--------------|
| Maintenance Spares | 9.29 | 9.82 |
| O & M Expenses | 5.16 | 5.46 |
| Receivables | 62.72 | 68.14 |
| Total | 77.17 | 83.42 |
| Rate of Interest | 13.50% | 13.50% |
| Interest | 5.21 | 11.26 |

5. 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. Ajmer Vidyut Vitran Nigam Ltd. (AVVNL), Respondent No. 2, has filed reply, vide affidavit dated 15.4.2013, in which it has raised the issue of time over-run. BSES Rajdhani Power Ltd. (BRPL), Respondent No. 12, has filed reply on 19.6.2014 in which it has raised the

issue of time over-run, O&M expenses, petition filing fee, publication expenses, service tax, etc. Punjab State Power Corporation Ltd. (PSPCL), Respondent No. 6, has filed reply vide affidavit dated 18.6.2014, in which it has raised the issue of declaration of commercial operation, etc. The petitioner has filed its rejoinder to the replies of BRPL and PSPCL, respectively vide affidavits dated 18.7.2014.

6. We have heard the representatives of the parties present at the hearing and have perused the material available on record. We proceed to dispose of the petition. While doing so, the submissions of the respondents shall be duly taken note of.

Capital Cost

7. Regulation 7 of the 2009 Tariff Regulations provides as follows:-

“7. Capital Cost. (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 funds 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.

Provided also that the Commission may issue guidelines for vetting of capital cost of hydro-electric projects by independent agency or expert and in that event the capital cost as vetted by such agency or expert may be considered by the Commission while determining the tariff for the hydro generating station:

Provided also that the Commission may issue guidelines for scrutiny and commissioning schedule of the hydro-electric projects in accordance with the tariff policy issued by the Central Government under section 3 of the Act from time to time.

Provided also that in case the site of a hydro generating station is awarded to a developer (not being a State controlled or owned company), by a State Government by following a two stage transparent process of bidding, any expenditure incurred or committed to be incurred by the project developer for getting the project site allotted shall not be included in the capital cost:

Provided also that the capital cost in case of such hydro generating station shall include:

(a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and

(b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) project in the affected area:

Provided also that the capital cost of the generating station shall include the cost for creating infrastructure for supply of power to the rural households located within a radius of five kilometers of the power station if the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility.

Provided also that where the power purchase agreement entered into between the generating company and the beneficiaries or the implementation agreement and the transmission service agreement entered into between the transmission licensee and the long-term transmission customer, as the case may be, provide for ceiling of actual expenditure, the capital expenditure admitted by the Commission shall take into consideration such ceiling for determination of tariff:

Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff."

8. The petitioner has submitted Auditor's Certificate dated 20.12.2012, for the expenditure incurred for the 125 MVAR Bus Reactor at Manesar associated with NRSS-XIII, upto its actual date of commercial operation, and additional capital expenditure projected to be incurred during the period from the date of commercial operation to 31.3.2013, verified on the basis of the information drawn from audited statements up to 31.3.2012, along with original petition. The details of apportioned approved FR cost, cost

as on date of commercial operation and additional capital expenditure projected to be incurred in respect of the asset covered in this petition is given hereunder:-

| (₹ in lakh) | | | |
|---------------------------|-------------------------------------|---|---------------------------------|
| Apportioned approved cost | Capital cost as on DOCO (1.10.2012) | Projected additional capitalization from DOCO to 31.03.2013 | Total estimated completion cost |
| 1851.51 | 1618.27 | 420.59 | 2038.86 |

Cost Over-run

9. The total estimated completion cost is ₹2038.86 lakh against apportioned approved cost of ₹1851.51 lakh. Thus, there is cost over-run of ₹187.35 lakh. The petitioner vide affidavit dated 28.3.2014 has submitted that the cost variation of ₹5.49 lakh (in control room and office building) and of ₹546 lakh in sub-station equipment cost is due to higher tender cost. For procurement, open competitive bidding route is followed by providing equal opportunity to all eligible firms. Through this process, lowest possible market prices for required product/services, as per detailed designing is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may vary from the cost estimate, depending upon prevailing market conditions, design and site requirement, whereas the estimates are prepared by the petitioner as per well defined procedures for cost estimates. The FR cost estimate is broad indicative cost worked out generally on the basis of average unit rates of recently awarded contract/ general practice. In these cases the tender cost is higher than the FR cost and cost is apportioned element-wise. However, the overall variation is ₹187 lakh with respect to the apportioned cost.

10. PSPCL has raised the issue of cost over-run vide its affidavit dated 18.6.2014 as well as during hearing on 24.6.2014. Similar issue has been raised by AVVNL, BRPL and PSPCL in their respective replies. In response to it, the petitioner has submitted, vide its

rejoinder affidavit dated 18.7.2014, that justification for cost variation has already been submitted to the Commission vide affidavit dated 28.3.2014.

11. There is overall variation of ₹187.35 lakh with reference to apportioned FR cost. We restrict the cost to apportioned approved cost of ₹1851.51 lakh.

Time Over-run

12. As per the investment approval dated 16.2.2009, the assets were scheduled to be commissioned within 33 months from the date of investment approval, i.e. by 1.12.2011. The asset was put under commercial operation on 1.10.2012. Accordingly, there is a delay of 10 months in this case.

13. The petitioner has, vide affidavit dated 28.3.2014, submitted that the delay in the commissioning of the asset is mainly on account of land acquisition. The petitioner approached Haryana Urban Development Authority for land acquisition for construction of Manesar sub-station under urgency clause on 4.3.2009. The notification for land acquisition under Sections 4 and 6 of the Land Acquisition Act were issued on 20.11.2009 and 2.2.2010 respectively. However, a Civil Writ Petition No. 8462 of 2010 was filed by 17 villagers in the Hon'ble High Court of Punjab and Haryana against the notification of land acquisition. The Hon'ble High Court delivered its decision in favour of PGCIL on 29.6.2010 and consequently, the petitioner got possession of the land for Manesar Sub-station on 23.8.2010.

14. The petitioner has further submitted that, as per L2 network, the land was to be handed over to the contractor by 27.9.2009. However, the land could be handed over only after possession of land for Manesar Sub-station on 23.8.2010 (after a gap of 11 months). Due to late possession of sub-station land, the subsequent activities of the sub-station like

civil works, foundation structure got delayed because of which commissioning of Bus Reactor at Manesar Sub-station got delayed by 10 months. The delay in handing over of land is beyond the control of the petitioner. The petitioner has requested to condone the delay.

15. The representative of PSPCL submitted that as per the date of commercial operation letter dated 15.10.2012, the reactor has been charged on 30.9.2012 at 22.23 hrs and immediately after one and half hours it was declared under commercial operation. It is difficult to conduct the tests and declare the commercial operation of the instant asset within such a short span of time. The petitioner in its rejoinder, vide affidavit dated 18.7.2014, has clarified that the Reactors do not come in ready to use condition. Requisite quality check and mandatory factory tests are carried out during various stages of manufacturing of Reactors prior to dispatch. However, Reactor is transported from the factory without oil due to convenience in transport and oil is supplied separately. All the necessary field testing is done to ensure its healthiness after complete erection of the reactor and filling of oil in it. This process generally takes around 21 days. After thorough checking and testing, the reactor is made ready to be taken into service. All the relevant tests/checks are carried out before charging and once successfully test charged the transmission elements are available for regular service @ 100% of its rated capacity, and hence declared under commercial operation. In the 2009 Tariff Regulations, trial run is not defined in case of Transmission elements. Therefore, test charging is considered as completion of trial run. Moreover, AC Transmission elements are such that once successfully test charged, elements are immediately available for use at its rated capacity through the loading on the element.

16. BRPL submitted that as per Form 5C of the petition, the date of completion of project is 28.7.2011 and the asset was commissioned on 1.10.2012. Accordingly, there is a delay of 14 months and IDC and IEDC for 14 months should not be allowed. The petitioner in its rejoinder has clarified that the timeline for completion of projects is given in Appendix-II to the 2009 Tariff Regulations and according to it the time schedule should be reckoned from the date of investment approval and not as contested by the BRPL. The petitioner has submitted that accordingly the time over-run in the instant case is 10 months and not 14 months.

17. We have considered the submissions made by the petitioner and respondents. It is observed that the petitioner was to hand over the land to the contractor on 27.9.2009. However, due to delay in acquisition of land and time taken in the court case, the land was handed over to the contractor on 23.8.2010. As per sequence of events submitted by the petitioner, civil writ petition no. 8462/2010 was filed by the farmers in the High Court of Haryana & Punjab on 7.3.2010 and the writ petition was disposed of on 29.6.2010. The total time taken by the court was about four months (7.3.2010 to 29.6.2010). This period falls within the period for processing the land acquisition (4.3.2009, date of approach for land acquisition to 23.8.2010, date of land provided). Hence, there is no additional impact of the aforesaid court proceedings on the over-all delay in completion of 125 MVA Bus Reactor.

18. The Commission in its order dated 30.4.2015 in Petition No. 1/RP/2015 (in Petition No. 79/TT/2012) observed as under:-

8. The 400 kV D/C Manesar-Neemrana line (covered in Petition No.69/TT/2012) was commissioned on 1.6.2012 after a time over-run of six months. By order dated 2.12.2014 in Petition 69/TT/2012, the Commission had condoned the delay in commissioning of 400 kV

D/C Manesar-Neemrana line on the ground that the delay in getting forest clearance was not attributable to the petitioner. ICT-I and ICT-II at Manesar which are designated as Asset-IIA and Asset-IIB in Petition No. 79/TT/2012 are linked to 400 kV D/C Manesar-Neemrana transmission line. The Commission in the impugned order observed that the ICT-I and ICT-II at Manesar (Asset-IIA and Asset-IIB) cannot be charged without the commissioning of 400 kV Neemrana-Manesar Transmission Line and as the tariff of the said line was subject matter of consideration in Petition No.69/TT/2012, the petitioner was granted liberty to approach the Commission for review after the decision in Petition No. 69/TT/2012. Since, the time over-run in case of the said transmission line has already been condoned and the ICT-I and ICT-II at Manesar (Asset-IIA and Asset-IIB) could not have been commissioned without the commissioning of the transmission line, the time over-run in respect of ICT-I and ICT-II for a period of 6 months is condoned.....”

19. There is total delay of 10 months in “the commissioning of 125 MVAR Bus Reactor at Manesar. We have considered the submission of the petitioner that ICTs could not be charged without the commissioning of 400 kV Neemrana- Manesar Line and have allowed time over-run for ICTs up-to COD of line i.e. 1.6.2012 as mentioned in aforesaid order. Bus Reactor is also a part of Manesar sub-station. Had the petitioner made efforts to complete the work of delayed project in time, this Bus Reactor could also have been completed by 1.6.2012 along with ICTs. Therefore, out of the total delay of 10 months in the commissioning of Bus Reactor, the delay of six months is being condoned here. The condonation of delay of six months includes the impact of 4 months delay due to court proceedings.

Treatment of IDC and IEDC

20. The petitioner has claimed Interest During Construction (IDC) of ₹254.28 lakh. As per the details of loan submitted by the petitioner, IDC works out to be ₹62.01 lakh (on accrual basis) up to the date of commercial operation. It is assumed that the petitioner has not defaulted in the payment of interest. Considering cash basis approach, the IDC upto the date of commercial operation is ₹29.18 lakh. The difference of ₹32.83 lakh (₹62.01 lakh-₹29.18 lakh) remains undischarged till the date of commercial operation and is being

deducted from the capital cost as on the date of commercial operation, in line with our order dated 10.2.2015 in Petition No. 200/TT/2012. The undischarged liability would be considered once it is discharged, subject to prudence check and submission of adequate information. Similar approach has been adopted in order dated 26.5.2015 in Petition No. 91/TT/2012. The petitioner is directed to submit the amount of actual IDC paid for the asset upto the date of commercial operation and balance IDC paid after the date of commercial operation at the time of truing up petition.

21. The petitioner has claimed Incidental Expenses during Construction (IEDC) of ₹74.55 lakh. In the absence of detailed computation of IEDC, percentage on Hard Cost indicated in the Abstract Cost Estimate is considered as the allowable limit to the IEDC. In the instant case, 9.75% of Hard Cost is indicated as IEDC in the Abstract Cost Estimate. Similar approach is adopted in our order dated 20.5.2015 in Petition No.109/TT/2013. IEDC amount of ₹74.55 lakh claimed by the petitioner appears to be within the limit and accordingly it is considered for the purpose of tariff calculations subject to truing up at the time of truing up. However, the petitioner is directed to submit the year-wise details of actual IEDC paid till the date of commercial operation for the instant asset at the time of truing up. The capital cost as on the date of commercial operation claimed and deemed to be claimed by the petitioner is given hereunder:-

(₹ in lakh)

| Claimed by the petitioner | | | | Deemed to be claimed by the petitioner | | | |
|---------------------------|-------|--------|-------------------------------|--|-------|-------|-------------------------------|
| Capital Cost as on DOCO | IEDC | IDC | Total Capital Cost as on DOCO | Capital Cost as on DOCO | IEDC | IDC | Total Capital Cost as on DOCO |
| 1289.45 | 74.55 | 254.28 | 1618.26 | 1289.45 | 74.55 | 29.18 | 1393.16 |

22. Details of IEDC/ IDC disallowed for the 4 months is given hereunder:-

Table-III

| As per Auditor's Certificate dated 20.12.2012 | IEDC | IDC | Total |
|--|-------------|-------------|-------------|
| IDC worked out on Cash Basis and IEDC Claimed for the total period of Completion (43 Months) | 74.55 | 29.18 | 103.73 |
| Detail of IEDC/ IDC Disallowed for 4 months | | | |
| Pro-rata IEDC/ IDC disallowed (4 months) | 6.93 | 2.71 | 9.65 |
| Total disallowed (4 months) | 6.93 | 2.71 | 9.65 |

Initial Spares

23. As per Regulation 8 (iv) (a) of the 2009 Tariff Regulations, initial spares is to be allowed for sub-station at 2.5% of total sub-station cost. The petitioner has claimed initial spares amounting to ₹72.95 lakh corresponding to the sub-Station. The excess initial spares claimed in respect of the asset have been deducted to arrive at the capital cost considered for the purpose of tariff as per details given below:-

(₹ in lakh)

| Particulars | Sub-Station Cost claimed as on Cut-off date / 31.3.2014 | Initial Spares Claimed against Sub-Station Cost as on Cut-off date | Sub-Station Cost after adjustment of IEDC/IDC disallowed as on Cut-off date | Proportionate claim of Initial Spares against the adjusted Sub-Station cost as on cut-off date | Ceiling Limit as per 2009 Tariff Regulations | Initial Spares worked out | Excess Initial Spares claimed |
|---------------------------------|---|--|---|--|--|---------------------------|-------------------------------|
| 125 MVAR Bus Reactor at Manesar | 2038.85 | 72.95 | 1804.10 | 64.55 | 2.50% | 44.60 | 19.95 |

24. Capital cost considered for the purpose of tariff in the present petition, after adjustment of IDC on cash basis, adjustment of IEDC/IDC on account of time over-run and adjustment of excess initial spares, is given below:-

(₹ in lakh)

| Capital cost deemed to be claimed by the petitioner | Disallowed IDC and IEDC due to time over run | Disallowed Excess Initial Spares | Capital cost considered as on COD for computing tariff |
|---|--|----------------------------------|--|
| 1393.16 | 9.65 | 19.95 | 1363.56 |

Projected Additional Capital Expenditure

25. 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:

Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities and the works deferred for execution shall be submitted alongwith the application for determination of tariff.”

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

“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 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”.

Therefore, cut-off date for the above mentioned assets is 31.3.2015.

27. Details of the projected additional capital expenditure claimed by the petitioner is as follows:-

| Particulars | DOCO | (₹ in lakh) | |
|---------------------------------|-----------|-------------|---------|
| | | 2012-13 | 2013-14 |
| 125 MVAR Bus Reactor at Manesar | 1.10.2012 | 420.59 | 0.00 |

28. Additional capital expenditure claimed up to 31.3.2014 together with cost as on the date of commercial operation indicates that the claim is within the apportioned approved cost of the asset, and hence the same is being considered for the purpose of tariff.

Debt- Equity Ratio

29. 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 modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

30. Debt-equity ratio as on the respective date of commercial operation considered for the purpose of tariff calculation is as follows:-

(₹ in lakh)

| Capital Cost as on COD | | |
|------------------------|----------------|---------------|
| Particulars | Amount | % |
| Debt | 954.50 | 70.00 |
| Equity | 409.06 | 30.00 |
| Total | 1363.56 | 100.00 |

31. Debt-equity ratio for projected additional capital expenditure is given hereunder:-

(₹ in lakh)

| Capital Cost as on 31.3.2014 | | |
|------------------------------|----------------|---------------|
| Particulars | Amount | % |
| Debt | 1,248.91 | 70.00 |
| Equity | 535.24 | 30.00 |
| Total | 1784.15 | 100.00 |

Return on Equity

32. 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”.

33. Based on the above, the Return on Equity has been considered as given overleaf:-

(₹ in lakh)

| Particulars | 2012-13 (Pro-rata) | 2013-14 |
|--|-----------------------|---------------|
| Opening Equity | 409.06 | 535.24 |
| Addition due to Additional Capital Expenditure | 126.18 | 0.00 |
| Closing Equity | 535.24 | 535.24 |
| Average Equity | 472.15 | 535.24 |
| 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% |
| Return on Equity (Pre Tax) | 41.27 | 93.57 |

34. The petitioner's prayer to recover the shortfall or refund the excess Annual Fixed Charges, on account on 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 shall be dealt under Regulation 15(5). Return on Equity has been computed @ 17.481% p.a on average equity as per Regulation 15 of the 2009 Tariff Regulations.

Interest on Loan

35. 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.”

36. 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 on actual loans have been considered as per the petition.

(b) The yearly repayment for the tariff period 2009-14 has been considered to be equal to the depreciation allowed for that year.

(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.

37. Detailed calculations in support of the weighted average rate of interest have been given in Annexure I to this order.

38. Based on the above, interest on loan has been calculated as per details given hereunder-

| Particulars | (₹ in lakh) | |
|--|-----------------------|---------------|
| | 2012-13 (Pro-rata) | 2013-14 |
| Gross Normative Loan | 954.50 | 1248.91 |
| Cumulative Repayment upto previous year | 0.00 | 39.07 |
| Net Loan-Opening | 954.50 | 1209.85 |
| Addition due to additional capital expenditure | 294.41 | 0.00 |
| Repayment during the year | 39.07 | 88.42 |
| Net Loan-Closing | 1209.85 | 1121.42 |
| Average Loan | 1082.17 | 1165.64 |
| Weighted Average Rate of Interest on Loan | 9.2741% | 9.2754% |
| Interest | 50.18 | 108.12 |

Depreciation

39. 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.”

40. The petitioner has claimed actual depreciation as a component of Annual Fixed Charges. Depreciation has been worked out as per Regulation 17 (4) as extracted above. Asset in the instant petition was put under commercial operation on 1.10.2012 and accordingly 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 to the 2009 Tariff Regulations. Accordingly, depreciation has been worked out on the basis of capital expenditure as on the date of commercial operation and additional capital expenditure incurred / projected to be incurred thereafter, wherein depreciation for the first year has been calculated on *pro-rata* basis for the year / part of year, as per details given hereunder:-

| (₹ in lakh) | | |
|--|-----------------------|--------------|
| Particulars | 2012-13 (Pro-rata) | 2013-14 |
| Opening Gross Block | 1363.56 | 1784.15 |
| Addition due to Projected Additional Capital Expenditure | 420.59 | 0.00 |
| Closing Gross Block | 1784.15 | 1784.15 |
| Average Gross Block | 1573.86 | 1784.15 |
| Rate of Depreciation | 4.9645% | 4.9561% |
| Depreciable Value | 1352.67 | 1541.94 |
| Remaining Depreciable Value | 1352.67 | 1502.87 |
| Depreciation | 39.07 | 88.42 |

Operation & Maintenance Expenses (O&M Expenses)

41. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the norms for operation and maintenance expenses for the transmission system based on the type of sub-station and the transmission line. The O&M Expenses shall be admissible as follows:-

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

42. The allowable O&M Expenses for the asset is as under:-

(₹ in lakh)

| 125 MVAR Bus Reactor at Manesar | 2009-10 | 2010-11 | 2011-12 | 2012-13 (Pro-rata) | 2013-14 |
|---------------------------------|---------|---------|---------|-----------------------|---------|
| 1 No 400 kV bay | - | - | - | 30.96 | 65.46 |
| Total O&M allowable | | | | 30.96 | 65.46 |

43. The petitioner has submitted that O&M Expenses 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 Expenses for tariff period 2009-14. The petitioner has also submitted that it would approach the Commission for suitable revision in the norms for O&M Expenses due to impact of wage revision.

44. The Commission has 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.

Interest on Working Capital

45. 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) Maintenance spares

Maintenance spares have been worked out based on 15% of Operation and Maintenance expenses specified in Regulation 19.

(ii) O & M Expenses

O&M expenses have been considered for one month of the O&M expenses.

(iii) Receivables

The receivables have been worked out on the basis of 2 months of annual transmission charges.

(iv) Rate of Interest on Working Capital

As per Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2011 dated 21.6.2010, SBI Base Rate Plus 350 bps as on 1.4.2012 (i.e.13.50%) has been considered as the rate of interest on working capital for the asset.

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

| Particulars | (₹ in lakh) | |
|--|-----------------------|---------------|
| | 2012-13 (Pro-rata) | 2013-14 |
| Maintenance Spares | 9.29 | 9.82 |
| O & M expenses | 5.16 | 5.46 |
| Receivables | 55.40 | 60.98 |
| Total | 69.84 | 76.25 |
| Rate (SBI Base Rate @10.00 % as on 1.4.2012 plus 350 points) | 13.50% | 13.50% |
| Interest | 4.71 | 10.29 |

Transmission charges

47. The transmission charges being allowed for the assets are given hereunder:-

(₹ in lakh)

| Annual Transmission Charges | 2012-13 (Pro-rata) | 2013-14 |
|------------------------------------|-------------------------------|----------------|
| Depreciation | 39.07 | 88.42 |
| Interest on Loan | 50.18 | 108.12 |
| Return on Equity | 41.27 | 93.57 |
| Interest on Working Capital | 4.71 | 10.29 |
| O & M Expenses | 30.96 | 65.46 |
| Total | 166.19 | 365.86 |

Filing Fee and the Publication Expenses

48. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. BRPL has submitted that the filing fee and expenses incurred on publication of notices shall be governed as per the Commission's order dated 11.9.2008 in Petition No. 129/2005. The petitioner has clarified that reimbursement of expenditure has been claimed in terms of Regulation 42 of the 2009 Tariff Regulations.

49. 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 A (1) (a) of the 2009 Tariff Regulations.

Licence Fee

50. 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

51. 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. BRPL has objected to recovery of service tax from the beneficiaries in future. The petitioner clarified that if notifications regarding granting of exemption to transmission service are withdrawn at a later date, the beneficiaries shall have to share the service tax paid by the petitioner. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Sharing of Transmission Charges

52. 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.

53. This order disposes of Petition No. 54/TT/2013.

Sd/

(A. K. Singhal)
Member

Sd/-

(Gireesh B. Pradhan)
Chairperson

| CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN | | | |
|---|--|--|----------------|
| (₹ in lakh) | | | |
| | Details of Loan | 2012-13 | 2013-14 |
| 1 | Bond XL | | |
| | Gross loan opening | 854.58 | 854.58 |
| | Cumulative Repayment upto DOCO/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 854.58 | 854.58 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 854.58 | 854.58 |
| | Average Loan | 854.58 | 854.58 |
| | Rate of Interest | 9.30% | 9.30% |
| | Interest | 79.48 | 79.48 |
| | Rep Schedule | 12 annual installments from 28.6.2016 | |
| 2 | Bond XXXIV | | |
| | Gross loan opening | 13.00 | 13.00 |
| | Cumulative Repayment upto DOCO/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 13.00 | 13.00 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 13.00 | 13.00 |
| | Average Loan | 13.00 | 13.00 |
| | Rate of Interest | 8.84% | 8.84% |
| | Interest | 1.15 | 1.15 |
| | Rep Schedule | 12 annual installments from 21.10.2014 | |
| 3 | Bond XXXI | | |
| | Gross loan opening | 97.00 | 97.00 |
| | Cumulative Repayment upto DOCO/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 97.00 | 97.00 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 8.08 |
| | Net Loan-Closing | 97.00 | 88.92 |
| | Average Loan | 97.00 | 92.96 |
| | Rate of Interest | 8.90% | 8.90% |
| | Interest | 8.63 | 8.27 |
| | Rep Schedule | 12 annual installments from 25.2.2014 | |
| 4 | Bond XXXVII | | |
| | Gross loan opening | 54.71 | 54.71 |
| | Cumulative Repayment upto DOCO/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 54.71 | 54.71 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 54.71 | 54.71 |
| | Average Loan | 54.71 | 54.71 |

| | | | |
|---|--|--|---------------|
| | Rate of Interest | 9.25% | 9.25% |
| | Interest | 5.06 | 5.06 |
| | Rep Schedule | 12 annual installments from 26.12.2015. | |
| 5 | Bond XXXVI | | |
| | Gross loan opening | 70.50 | 70.50 |
| | Cumulative Repayment upto DOCO/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 70.50 | 70.50 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 70.50 | 70.50 |
| | Average Loan | 70.50 | 70.50 |
| | Rate of Interest | 9.35% | 9.35% |
| | Interest | 6.59 | 6.59 |
| | Rep Schedule | 15 annual installments from 29.8.2016. | |
| 6 | Bond XXXV | | |
| | Gross loan opening | 43.00 | 43.00 |
| | Cumulative Repayment upto DOCO/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 43.00 | 43.00 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 43.00 | 43.00 |
| | Average Loan | 43.00 | 43.00 |
| | Rate of Interest | 9.64% | 9.64% |
| | Interest | 4.15 | 4.15 |
| | Rep Schedule | 12 annual installments from 31.5.2015. | |
| | Total Loan | | |
| | Gross loan opening | 1132.79 | 1132.79 |
| | Cumulative Repayment upto DOCO/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 1132.79 | 1132.79 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 8.08 |
| | Net Loan-Closing | 1132.79 | 1124.71 |
| | Average Loan | 1132.79 | 1128.75 |
| | Rate of Interest | 9.2741% | 9.2754% |
| | Interest | 105.06 | 104.70 |