

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 205/TT/2012**

**Coram:**

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

**Date of Hearing : 30.07.2013**

**Date of Order : 23.01.2014**

**In the matter of:**

Approval under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 for determination of transmission tariff for (i) 400/220 kV, 315 MVA ICT-I alongwith associated bays at Bhiwani Sub-station and (ii) 400/220 kV, 315 MVA ICT-II alongwith associated bays at Bhiwani Sub-station under 765 kV system for Central Part of Northern Grid Part-III, for tariff block 2009-14 in Northern Region.

**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. Uttar Pradesh 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  
Shri U. K. Tyagi, PGCIL  
Shri M.M. Mondal, PGCIL

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

### **ORDER**

This petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of the transmission charges for (i) 400/220 kV, 315 MVA ICT-I alongwith associated bays at Bhiwani Sub-station and (ii) 400/220 kV, 315 MVA ICT-II alongwith associated bays at Bhiwani Sub-station under 765 kV system for Central Part of Northern Grid Part-III, for tariff block 2009-14 in Northern Region based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (the 2009 Tariff Regulations).

2. The investment approval for the scheme was accorded by the Board of Directors of the petitioner, vide letter dated 27.10.2006 for ₹23825 lakh, including Interest During Construction (IDC) of ₹2085 lakh based on 2nd Quarter, 2006 price level. The scope of works covered under the scheme broadly includes:-

#### **Transmission lines**

- i) Meerut –Bhiwani 765 kV S/C line -175 km
- ii) LILO of Bareilly-Mandola 400 kV D/C line at Meerut -103 km
- iii) LILO of both circuits of Bawana/Bahadurgarh-Hissar 400 kV D/C line at Bhiwani – 15 km

### Sub-stations

- i) New 2x1000 MVA, 765/400 kV and 2x500 MVA, 400/220 kV Bhiwani 765/400/220 kV substation
- ii) Extension of Meerut 765/400 kV Substation
- iii) Extension of Mandola 400/220 kV Substation
- iv) Extension of Ballabagarh 400/220 kV Substation-Realignment works

### Reactive Compensation

- i) Meerut – Bhiwani 765 kV S/C line (Line Reactor) 240 MVAR (Swithable)
- ii) Bhiwani 2x240 MVAR (Bus Reactors)

3. The details of the assets covered in the instant petition are as follows:-

| <b>Name of the Asset</b>   | <b>Scheduled commissioning as per Investment Approval</b> | <b>Date of Commercial Operation</b> |
|--|---|-------------------------------------|
| 400/220 kV, 315 MVA ICT-I along with associated bays at Bhiwani Sub-station (" <b>hereinafter referred to as the Asset-1</b> ")  | 1.6.2012  | 1.12.2012                           |
| 400/220 kV, 315 MVA ICT-II along with associated bays at Bhiwani Sub-station (" <b>hereinafter referred to as the Asset-2</b> ") | 1.6.2012  | 1.12.2012                           |

4. The petitioner has claimed the transmission tariff for Asset-1 and Asset-2 on the basis of capital expenditure incurred/ to be incurred up to anticipated date of commercial operation and estimated additional capital expenditure projected to be incurred from anticipated date of commercial operation (i.e. 1.12.2012) to 31.3.2014. Subsequently, vide affidavit dated 22.2.2013, the petitioner has

confirmed that both the assets have been put under commercial operation on 1.12.2012.

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

(₹ in lakh)

| Particulars                 | Asset - 1     |               | Asset - 2     |               |
|-----------------------------|---------------|---------------|---------------|---------------|
|                             | 2012-13       | 2013-14       | 2012-13       | 2013-14       |
| Depreciation                | 42.84         | 161.53        | 42.92         | 161.81        |
| Interest on Loan            | 55.42         | 200.53        | 55.52         | 200.86        |
| Return on Equity            | 45.79         | 172.99        | 45.87         | 173.27        |
| Interest on working capital | 7.65          | 26.06         | 7.65          | 26.08         |
| O & M Expenses              | 78.43         | 248.74        | 78.43         | 248.74        |
| <b>Total</b>                | <b>230.13</b> | <b>809.85</b> | <b>230.39</b> | <b>810.76</b> |

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

(₹ in lakh)

| Particulars        | Asset - 1   |              | Asset - 2   |              |
|--------------------|-------------|--------------|-------------|--------------|
|                    | 2012-13     | 2013-14      | 2012-13     | 2013-14      |
| Maintenance Spares | 35.29       | 37.31        | 35.29       | 37.31        |
| O & M Expenses     | 19.61       | 20.73        | 19.61       | 20.73        |
| Receivables        | 115.07      | 134.98       | 115.20      | 135.13       |
| Total              | 169.97      | 193.02       | 170.10      | 193.17       |
| Rate of Interest   | 13.5%       | 13.5%        | 13.5%       | 13.5%        |
| Interest           | <b>7.65</b> | <b>26.06</b> | <b>7.65</b> | <b>26.08</b> |

7. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act. The replies to the petition have been filed by Respondent No 9 Uttar Pradesh Power Corporation Ltd (UPPCL), vide affidavit dated 22.7.2013 and Respondent No 12 BSES Rajdhani Power Ltd (BRPL), vide affidavit dated

26.7.2013. The objections raised by the respondent and their clarifications are dealt in relevant paragraphs of this order.

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

### **Capital cost**

9. Regulation 7 of the 2009 Tariff Regulations so far as relevant provides as under:-

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

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

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

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

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

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

10. The petitioner has claimed capital cost of ₹2303.90 lakh and ₹2308.22 lakh as on the date of commercial operation for the Asset-1 and 2, on the basis of auditor's certificate dated 17.7.2012. The details of apportioned approved cost, capital cost as on actual date of commercial operation and estimated additional capital expenditure projected to be incurred for the asset covered in this petition are summarized below:-

**(₹ in lakh)**

| Particular | Apportioned approved cost | Actual cost incurred as on date of commercial operation | Projected additional capital expenditure |         | Total estimated completion cost |
|------------|---------------------------|---|--|---------|---------------------------------|
|            |                           |   | 2011-12                                  | 2013-14 |                                 |
| Asset-1    | <b>4046.43</b>            | 2303.90   | 630.63                                   | 728.11  | <b>3662.64</b>                  |
| Asset-2    | <b>4046.43</b>            | 2308.22   | 631.40                                   | 728.77  | <b>3668.39</b>                  |

\* Inclusive of initial spares amounting to ₹37.05 lakh and ₹36.05 lakh for Asset-1 and Asset-2 pertaining to Sub-station. The same falls within the ceiling limit specified in Regulation 8 of the 2009 Tariff Regulations.

### **Time over-run, IEDC and IDC**

11. As per investment approval, the assets were scheduled to be commissioned within 30 months from the date of investment approval i.e. by 3.5.2012, say 1.6.2012 against which assets covered in the instant petition were put under commercial operation on 1.12.2012. Accordingly, there is a delay of six months in commissioning the assets.

12. The petitioner has submitted that the delay in commissioning was on account of delay in handing over of Sub-station land at Bhiwani by the authorities. The petitioner, vide affidavit dated 20.2.2013, has submitted the copy of the communications it had with the authorities. The petitioner has not submitted the scheduled/expected and the actual date of handing over the sub-

station land at Bhiwani. The information filed is not sufficient and it does not show that there has been delay in handing over the land.

13. BRPL, has submitted that the entire IDC and IEDC for the time delay of six months should be borne by the petitioner and the same should not be passed on to the beneficiaries.

14. The Commission, during the hearing on 30.7.2013 directed the petitioner to submit PERT chart indicating the activities on critical path and impact of delay on those activities. Petitioner vide affidavit dated 11.9.2013 has submitted that it uses L2 Network in place of PERT chart and accordingly the petitioner has placed on record a copy of the L2 Network.

15. On perusal of the L2 Network, it is revealed that the 765 kV Structure Erection (ID:1035) and 400 kV Structure Erection (ID: 1038) were scheduled to start on 15.11.2010 and 25.8.2010 respectively and to be completed by 19.5.2011 and 1.4.2011 respectively. In other words, the 400 kV Structure Erection was planned to be completed 50 days earlier than 765 kV sub-station erection. Similarly, 765 kV Equipment Erection (ID: 1058) as well as 400 kV Equipment Erection (ID: 1061) were scheduled to start on 4.4.2011 and was scheduled to finish on 23.6.2011 and 13.6.2011 respectively. In other words, the 400 kV Equipment Erection was scheduled to be completed 10 days prior to completion of 765 kV equipment.

16. In Petition No. 99/TT/2012, pertaining to 2x1000 MVA and 765/400 kV ICTs in the same sub-station, the petitioner has claimed tariff based on anticipated date of commercial operation of 1.7.2012, i.e. with 1 month delay



with reference to scheduled date of commercial operation of 1.6.2012. It is clear that the petitioner has commissioned the 765/400 kV ICTs before commissioning 400/220 kV ICTs, which is contrary to the plan in L2 Network. Hence, from the information submitted by the petitioner it cannot be concluded that the reasons claimed by the petitioner are the actual reasons for the delay.

17. The Hon'ble Appellate Tribunal for Electricity (the Tribunal) in its judgement dated 28.11.2013 in Appeal No.165 of 2012 has observed as under:-

"29. The Central Commission has been mandated to determine the transmission tariff for the Appellant. The Central Commission has every right to ask any relevant details from the Appellant for carrying out the prudence check on the expenditure of the Appellant.

30. The conduct of the Appellant is surprising. The Appellant is a Nava Public Sector Company of the Central Government. Its Board is empowered to approve its projects including the cost estimates for such projects. The Central Commission also accepts the cost approved by the Board of the Appellant. Under such circumstances, the Appellant could have approached its own Board for approval of the Revised Cost Estimates as desired by the Central Commission. Instead of going to its own Board, the Appellant preferred to approach this Tribunal in Appeal. Such an attitude is not proper. Accordingly this issue is decided against the Appellant."

18. The petitioner was directed to submit the PERT chart clearly showing the critical path to establish that the reasons for the delay were beyond the control of the petitioner. The petitioner has not filed the PERT chart and chose to file the L2 Network. The L2 Network filed by the petitioner does not clearly establish that the reasons for time over-run of 6 months were beyond the control of the petitioner. The petitioner should have filed the PERT chart as directed and it may have helped its case to understand the fact whether activities associating with the assets under the instant petition are critical. The information filed by the petitioner does not show that the reasons for the delay are beyond its control. Accordingly, the time over-run in the instant petition is not condoned. IDC and

IEDC for six months have been reduced from the capital cost claimed, as on the date of commercial operation, for the purpose of determination of transmission tariff. Details of the IDC and IEDC disallowed is as follows:-

(₹ in lakh)

| <b>Asset-1</b>  |               |              |
|---|---------------|--------------|
| <b>Detail of IDC and IEDC as per CA Certificate dated 17.7.2012</b> |               |              |
|   | <b>IDC</b>    | <b>IEDC</b>  |
| up to March'2012  | 85.09         | 10.62        |
| From April'12 to May'12   | 16.18         | 0.00         |
| From June'12 to Nov'12  | 58.80         | 0.00         |
| <b>Total IDC and IEDC Claimed</b>                                   | <b>160.07</b> | <b>10.62</b> |
| <b>Detail of IDC Disallowed for six months</b>                      |               |              |
| From June'12 to Nov'12 (for 6 months)                               | 58.80         | 0.00         |
| <b>Total Disallowed IDC (for 6 months)</b>                          | <b>58.80</b>  | <b>0.00</b>  |

(₹ in lakh)

| <b>Asset-2</b>  |               |              |
|---|---------------|--------------|
| <b>Detail of IDC and IEDC as per CA Certificate dated 17.7.2012</b> |               |              |
|   | <b>IDC</b>    | <b>IEDC</b>  |
| up to March'2012  | 85.22         | 10.64        |
| From April'12 to May'12   | 16.21         | 0.00         |
| From June'12 to Nov'12  | 58.92         | 0.00         |
| <b>Total IDC and IEDC Claimed</b>                                   | <b>160.35</b> | <b>10.64</b> |
| <b>Detail of IDC Disallowed for six months</b>                      |               |              |
| From June'12 to Nov'12 (for 6 months)                               | 58.92         | 0.00         |
| <b>Total Disallowed IDC (for 6 months)</b>                          | <b>58.92</b>  | <b>0.00</b>  |

19. The IDC disallowed for the period of delay has been deducted proportionately from the cost of elements as on date of commercial operation (excluding land). Further, no amount of IEDC has been deducted as petitioner has not claimed any amount of IEDC during the period of delay.

### **Cost over-run**

20. UPPCL has submitted that the reason given by the petitioner for cost-variation in some of the items is not justified and hence the increase in the cost of the items should be rejected. BRPL has submitted that the completion cost is

lower than the apportioned approved cost because of change in the scope and hence it is difficult to determine the cost over-run. In response, the petitioner has submitted that the estimated completion cost of the asset would be lower than the approved cost, inspite of the change in the scope.

21. We have considered the submissions of both the petitioner and the respondents. The cost over-run in case of certain items is allowed. It is observed that the estimated completion cost is lower than the apportioned approved cost inspite of delay of 6 months in commissioning the assets. The cost estimates of the petitioner are not realistic not only in this petition but also in other similar petitions. In our view, the petitioner should adopt a prudent procedure to make cost estimates of different elements of the transmission projects more realistic.

22. The capital cost considered, after deducting disallowed IDC, for the purpose of tariff determination as on date of commercial operation is as follows:-

(₹ in lakh)

| <b>Particulars</b>  | <b>Asset-1</b> | <b>Asset-2</b> |
|---|----------------|----------------|
| Capital cost claimed as on date of commercial operation           | 2303.90        | 2308.22        |
| Less: Disallowed IDC  | 58.80          | 58.92          |
| <b>Capital cost considered as on date of commercial operation</b> | <b>2245.10</b> | <b>2249.30</b> |

### **Projected additional capital expenditure**

23. Clause (1) of Regulation 9 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.”

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

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

25. The petitioner has claimed projected additional capital expenditure for the assets are as under:-

| (₹ in lakh)                               |  |  |                             |
|---|--|--|-----------------------------|
| <b>Asset-1</b>                            |  |  |                             |
| Year                                      | Work proposed to be added after date of commercial operation upto cut off date | Amount to be capitalized /proposed to be capitalized | Justification               |
| date of commercial operation to 31.3.2013 | Sub station  | 627.84   | Balance /Retention Payments |
|   | PLCC   | 2.79   |                             |
|   | <b>Sub Total</b>   | <b>630.63</b>  |                             |
| 2013-14                                   | Freehold Land  | 70.79  |                             |
|   | Building & civil works   | 106.26   |                             |
|   | Sub station  | 545.16   |                             |
|   | PLCC   | 5.90   |                             |
|   | <b>Sub Total</b>   | <b>728.11</b>  |                             |
|   | <b>Total</b>   | <b>1358.74</b>                                       |                             |
| <b>Asset-2</b>                            |  |  |                             |
| Year                                      | Work proposed to be added after date of commercial operation upto cut off date | Amount to be capitalized /proposed to be capitalized | Justification               |
| date of commercial operation to 31.3.2013 | Sub station  | 628.61   | Balance /Retention Payments |
|   | PLCC   | 2.79   |                             |
|   | <b>Sub Total</b>   | <b>631.40</b>  |                             |
| 2013-14                                   | Freehold Land  | 70.79  |                             |
|   | Building & civil works   | 106.26   |                             |
|   | Sub station  | 545.82   |                             |
|   | PLCC   | 5.90   |                             |
|   | <b>Sub Total</b>   | <b>728.77</b>  |                             |
|   | <b>Total</b>   | <b>1360.17</b>                                       |                             |

26. The projected additional capital cost claimed falls within the cut-off date and the same has been considered for the purpose of tariff determination.

### **Debt- equity ratio**

27. 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.”

28. The detail of opening debt-equity ratio of assets considered for the purpose of tariff calculation is given hereunder:-

(₹ in lakh)

| Asset-1 | Capital Cost on Date of Commercial Operation |         |        |
|---------|--|---------|--------|
|         | Particulars                                  | Amount  | %      |
|         | Debt   | 1571.57 | 70.00  |
|         | Equity                                       | 673.53  | 30.00  |
|         | Total  | 2245.10 | 100.00 |
| Asset-2 |  |         |        |
|         |  | Amount  | %      |
|         | Debt   | 1574.51 | 70.00  |
|         | Equity                                       | 674.79  | 30.00  |
|         | Total  | 2249.30 | 100.00 |

29. Details of debt-equity in respect of the assets as on 31.3.2014 are as follows:-

(₹ in lakh)

| <b>Asset-1</b>                   |         |        |
|----------------------------------|---------|--------|
| <b>Capital Cost on 31.3.2014</b> |         |        |
| Particulars                      | Amount  | %      |
| Debt                             | 2522.69 | 70.00  |
| Equity                           | 1081.15 | 30.00  |
| Total                            | 3603.84 | 100.00 |
| <b>Asset-2</b>                   |         |        |
|                                  | Amount  | %      |
| Debt                             | 2526.63 | 70.00  |
| Equity                           | 1082.84 | 30.00  |
| Total                            | 3609.47 | 100.00 |

30. The debt: equity ratio for projected additional capitalisation considered are given hereunder:-

(₹ in lakh)

| <b>Asset-1</b> |        |        |
|----------------|--------|--------|
| <b>2012-13</b> |        |        |
| Particulars    | Amount | %      |
| Debt           | 441.44 | 70.00  |
| Equity         | 189.19 | 30.00  |
| Total          | 630.63 | 100.00 |
| <b>2013-14</b> |        |        |
|                | Amount | %      |
| Debt           | 509.68 | 70.00  |
| Equity         | 218.43 | 30.00  |
| Total          | 728.11 | 100.00 |
| <b>Asset-2</b> |        |        |
| <b>2012-13</b> |        |        |
|                | Amount | %      |
| Debt           | 441.98 | 70.00  |
| Equity         | 189.42 | 30.00  |
| Total          | 631.40 | 100.00 |
| <b>2013-14</b> |        |        |
|                | Amount | %      |
| Debt           | 510.14 | 70.00  |
| Equity         | 218.63 | 30.00  |
| Total          | 728.77 | 100.00 |

### **Return on equity**

31. 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".

32. The petitioner has claimed Return on Equity at the rate of 15.5% in accordance with clause (2) of Regulation 15 of the 2009 Tariff Regulations. The details of Return on Equity allowed is given overleaf:-

(₹ in lakh)

| Particular                                | 2012-13      | 2013-14       | 2012-13      | 2013-14       |
|---|--------------|---------------|--------------|---------------|
|   | Asset-1      |               | Asset-2      |               |
| Opening Equity                            | 673.53       | 862.72        | 674.79       | 864.21        |
| Addition due to Additional Capitalisation | 189.19       | 218.43        | 189.42       | 218.63        |
| Closing Equity                            | 862.72       | 1081.15       | 864.21       | 1082.84       |
| Average Equity                            | 768.12       | 971.94        | 769.50       | 973.53        |
| Return on Equity (Base Rate )             | 15.50%       | 15.50%        | 15.50%       | 15.50%        |
| Tax rate for the year 2008-09 (MAT)       | 11.330%      | 11.330%       | 11.330%      | 11.330%       |
| Rate of Return on Equity (Pre Tax )       | 17.481%      | 17.481%       | 17.481%      | 17.481%       |
| <b>Return on Equity (Pre Tax)</b>         | <b>44.76</b> | <b>169.90</b> | <b>44.84</b> | <b>170.18</b> |

33. The petitioner's request to allow grossing up the base rate of return with the applicable tax rate as per the relevant Finance Act for the relevant year and direct settlement of tax liability between the transmission licensee and the beneficiaries on year to year basis, shall be settled in accordance with the provisions of Regulation 15 of the 2009 Tariff Regulations.

### **Interest on loan**

34. 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.”

35. In keeping with the provisions of Regulation 16, the petitioner's entitlement to interest on loan has been calculated on the following basis:-

(a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition.

(b) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that period.

(c) Notwithstanding moratorium period availed by the transmission licensee, the repayment of the loan shall be considered from the first

year of commercial operation of the project and shall be equal to the annual depreciation allowed.

(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.

36. Detailed calculations in support of the weighted average rates of interest have been given in Annexure I (for Asset-1) and Annexure II (for Asset-2) to this order.

37. Accordingly, the interest on loan has been calculated on the basis of prevailing rate available as on date of commercial operation. Any change in rate of interest subsequent to date of commercial operation will be considered at the time of truing up. Based on the above, interest on loan has been calculated are given hereunder:-

(₹ in lakh)

| Particulars                                    | Asset - 1    |               | Asset - 2    |               |
|--|--------------|---------------|--------------|---------------|
|  | 2012-13      | 2013-14       | 2012-13      | 2013-14       |
| Gross Normative Loan                           | 1571.57      | 2013.01       | 1574.51      | 2016.49       |
| Cumulative Repayment upto previous year        | 0.00         | 41.80         | 0.00         | 41.88         |
| Net Loan-Opening                               | 1571.57      | 1971.21       | 1574.51      | 1974.61       |
| Addition due to additional capital expenditure | 441.44       | 509.68        | 441.98       | 510.14        |
| Repayment during the year                      | 41.80        | 158.43        | 41.88        | 158.71        |
| Net Loan-Closing                               | 1971.21      | 2322.46       | 1974.61      | 2326.04       |
| Average Loan                                   | 1771.39      | 2146.83       | 1774.56      | 2150.32       |
| Weighted Average Rate of Interest on Loan      | 9.1414%      | 9.1414%       | 9.1414%      | 9.1414%       |
| <b>Interest</b>                                | <b>53.98</b> | <b>196.25</b> | <b>54.07</b> | <b>196.57</b> |

38. The petitioner has considered "Proposed Loan" in actual loan portfolio (in case of all the assets covered in the instant petition) for the purpose of determination of weighted average rate of interest to be considered for the computation of interest on normative loan. As per Regulation 16 (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 each year applicable to the project".

Accordingly, only actual loans drawn have been considered for the computation of weighted average rate of interest.

### **Depreciation**

39. Regulation 17 of the 2009 Tariff Regulations provides as under:-

"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. Both the Assets were put under commercial operation as on 1.12.2012 and 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 Tariff Regulation 2009-14 as under:-

(₹ in lakh)

| Particulars   | Asset - 1    |               | Asset - 2    |               |
|---|--------------|---------------|--------------|---------------|
|   | 2012-13      | 2013-14       | 2012-13      | 2013-14       |
| Opening Gross Block                                 | 2245.10      | 2875.73       | 2249.30      | 2880.70       |
| Addition due to Projected Additional Capitalisation | 630.63       | 728.11        | 631.40       | 728.77        |
| Closing Gross Block                                 | 2875.73      | 3603.84       | 2880.70      | 3609.47       |
| Average Gross Block                                 | 2560.42      | 3239.79       | 2565.00      | 3245.09       |
| Rate of Depreciation                                | 4.8981%      | 4.8901%       | 4.8988%      | 4.8907%       |
| Depreciable Value                                   | 2141.66      | 2721.24       | 2145.79      | 2726.01       |
| Remaining Depreciable Value                         | 2141.66      | 2679.44       | 2145.79      | 2684.13       |
| Depreciation  | <b>41.80</b> | <b>158.43</b> | <b>41.88</b> | <b>158.71</b> |
| Cumulative Depreciation                             | 41.80        | 200.23        | 41.88        | 200.59        |

### Operation & Maintenance expenses

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

(₹ in lakh)

| Element                       | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|-------------------------------|---------|---------|---------|---------|---------|
| 400 kV bays<br>(₹ lakh / bay) | 52.40   | 55.40   | 58.57   | 61.92   | 65.46   |
| 220 kV bays<br>(₹ lakh / bay) | 36.68   | 38.78   | 41.00   | 43.34   | 45.82   |

42. The allowable O&M expenses for the assets are given hereunder:-

(₹ in lakh)

| Element | 2012-13 | 2013-14 |
|---------|---------|---------|
| Asset-1 | 78.43   | 248.74  |
| Asset-2 | 78.43   | 248.74  |
| Total   | 156.86  | 497.48  |

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

44. While specifying the norms for Operation and Maintenance Expenses, the Commission has in the 2009 Tariff Regulations already factored 50% on account of pay revision of the employees of PSUs after extensive consultation with the stakeholders. At this stage there does not seem to be any justification for deviating from the norms. However, in case the petitioner separately approaches the Commission by making an appropriate application, the same shall be dealt with in accordance with law.

#### **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) Receivables**

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables as a component of working capital will be equivalent to two months' of fixed cost. The petitioner has claimed the receivables on the basis of 2 months' of annual transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

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

Regulation 18 (1) (c) (ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M expenses as part of the working capital from 1.4.2009. The value of maintenance spares has accordingly been worked out.

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

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

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

In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and shall be equal to State Bank of India Base Rate of 10% plus 350 bps as on 1.4.2012 (13.50%). The interest on working capital for the assets covered in the petition has been worked out accordingly.

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

(₹ in lakh)

| Particulars        | Asset - 1     |               | Asset - 2     |               |
|--------------------|---------------|---------------|---------------|---------------|
|                    | 2012-13       | 2013-14       | 2012-13       | 2013-14       |
| Maintenance Spares | 35.29         | 37.31         | 35.29         | 37.31         |
| O & M Expenses     | 19.61         | 20.73         | 19.61         | 20.73         |
| Receivables        | 113.27        | 133.19        | 113.40        | 133.34        |
| <b>Total</b>       | <b>168.17</b> | <b>191.23</b> | <b>168.30</b> | <b>191.38</b> |
| Rate of Interest   | 13.50%        | 13.50%        | 13.50%        | 13.50%        |
| Interest           | <b>7.57</b>   | <b>25.82</b>  | <b>7.57</b>   | <b>25.84</b>  |

### Transmission charges

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

(₹ in lakh)

| Particulars                 | Asset - 1     |               | Asset - 2     |               |
|-----------------------------|---------------|---------------|---------------|---------------|
|                             | 2012-13       | 2013-14       | 2012-13       | 2013-14       |
| Depreciation                | 41.80         | 158.43        | 41.88         | 158.71        |
| Interest on Loan            | 53.98         | 196.25        | 54.07         | 196.57        |
| Return on Equity            | 44.76         | 169.90        | 44.84         | 170.18        |
| Interest on Working Capital | 7.57          | 25.82         | 7.57          | 25.84         |
| O & M Expenses              | 78.43         | 248.74        | 78.43         | 248.74        |
| <b>Total</b>                | <b>226.54</b> | <b>799.14</b> | <b>226.80</b> | <b>800.04</b> |

### Filing fee and the publication expenses

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

expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis.

### **Licence fee**

49. 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. BRPL has submitted that the petitioner's request for reimbursement for licence fee should be rejected as license fee is the eligibility fee of a licence holder and it is the onus of the petitioner.

50. 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. The BRPL has objected to recovery of service tax from the beneficiaries in future as CBEC has exempted service tax on transmission Vide notification No. 11/2010-service tax dated 20.7.2010. 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. 205/TT/2012.

sd/-

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

sd/-

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

## Annexure I

## CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

| Details of Loan |  | 2012-13                                  | 2013-14        |
|-----------------|--|--|----------------|
| <b>1</b>        | <b>Bond XXXIV</b>                            |  |                |
|                 | Gross loan opening                           | 450.00                                   | 450.00         |
|                 | Cumulative Repayment upto DOCO/previous year | 0.00                                     | 0.00           |
|                 | Net Loan-Opening                             | 450.00                                   | 450.00         |
|                 | Additions during the year                    | 0.00                                     | 0.00           |
|                 | Repayment during the year                    | 0.00                                     | 0.00           |
|                 | Net Loan-Closing                             | 450.00                                   | 450.00         |
|                 | Average Loan                                 | 450.00                                   | 450.00         |
|                 | Rate of Interest                             | 8.84%                                    | 8.84%          |
|                 | Interest                                     | <b>39.78</b>                             | <b>39.78</b>   |
|                 | Rep Schedule                                 | 12 Annual instalments from<br>21.10.2014 |                |
| <b>2</b>        | <b>Bond XXXVI</b>                            |  |                |
|                 | Gross loan opening                           | 650.00                                   | 650.00         |
|                 | Cumulative Repayment upto DOCO/previous year | 0.00                                     | 0.00           |
|                 | Net Loan-Opening                             | 650.00                                   | 650.00         |
|                 | Additions during the year                    | 0.00                                     | 0.00           |
|                 | Repayment during the year                    | 0.00                                     | 0.00           |
|                 | Net Loan-Closing                             | 650.00                                   | 650.00         |
|                 | Average Loan                                 | 650.00                                   | 650.00         |
|                 | Rate of Interest                             | 9.35%                                    | 9.35%          |
|                 | Interest                                     | <b>60.78</b>                             | <b>60.78</b>   |
|                 | Rep Schedule                                 | 15 Annual instalments from<br>29.8.2016  |                |
|                 | <b>Total Loan</b>                            |  |                |
|                 | Gross loan opening                           | 1100.00                                  | 1100.00        |
|                 | Cumulative Repayment upto DOCO/previous year | 0.00                                     | 0.00           |
|                 | Net Loan-Opening                             | 1100.00                                  | 1100.00        |
|                 | Additions during the year                    | 0.00                                     | 0.00           |
|                 | Repayment during the year                    | 0.00                                     | 0.00           |
|                 | Net Loan-Closing                             | 1100.00                                  | 1100.00        |
|                 | Average Loan                                 | 1100.00                                  | 1100.00        |
|                 | <b>Weighted Average Rate of Interest</b>     | <b>9.1414%</b>                           | <b>9.1414%</b> |
|                 | <b>Interest</b>                              | 100.56                                   | 100.56         |

## Annexure II

### CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

|          | Details of Loan                              | 2012-13                                  | 2013-14        |
|----------|--|--|----------------|
| <b>1</b> | <b>Bond XXXIV</b>                            |  |                |
|          | Gross loan opening                           | 450.00                                   | 450.00         |
|          | Cumulative Repayment upto DOCO/previous year | 0.00                                     | 0.00           |
|          | Net Loan-Opening                             | 450.00                                   | 450.00         |
|          | Additions during the year                    | 0.00                                     | 0.00           |
|          | Repayment during the year                    | 0.00                                     | 0.00           |
|          | Net Loan-Closing                             | 450.00                                   | 450.00         |
|          | Average Loan                                 | 450.00                                   | 450.00         |
|          | Rate of Interest                             | 8.84%                                    | 8.84%          |
|          | Interest                                     | 39.78                                    | 39.78          |
|          | Rep Schedule                                 | 12 Annual instalments from<br>21.10.2014 |                |
| <b>2</b> | <b>Bond XXXVI</b>                            |  |                |
|          | Gross loan opening                           | 650.00                                   | 650.00         |
|          | Cumulative Repayment upto DOCO/previous year | 0.00                                     | 0.00           |
|          | Net Loan-Opening                             | 650.00                                   | 650.00         |
|          | Additions during the year                    | 0.00                                     | 0.00           |
|          | Repayment during the year                    | 0.00                                     | 0.00           |
|          | Net Loan-Closing                             | 650.00                                   | 650.00         |
|          | Average Loan                                 | 650.00                                   | 650.00         |
|          | Rate of Interest                             | 9.35%                                    | 9.35%          |
|          | Interest                                     | 60.78                                    | 60.78          |
|          | Rep Schedule                                 | 15 Annual instalments from<br>29.8.2016  |                |
|          | <b>Total Loan</b>                            |  |                |
|          | Gross loan opening                           | 1100.00                                  | 1100.00        |
|          | Cumulative Repayment upto DOCO/previous year | 0.00                                     | 0.00           |
|          | Net Loan-Opening                             | 1100.00                                  | 1100.00        |
|          | Additions during the year                    | 0.00                                     | 0.00           |
|          | Repayment during the year                    | 0.00                                     | 0.00           |
|          | Net Loan-Closing                             | 1100.00                                  | 1100.00        |
|          | Average Loan                                 | 1100.00                                  | 1100.00        |
|          | <b>Weighted Average Rate of Interest</b>     | <b>9.1414%</b>                           | <b>9.1414%</b> |
|          | <b>Interest</b>                              | <b>100.56</b>                            | <b>100.56</b>  |