

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO. 256/TT/2015

Coram:

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

**Date of Hearing: 29.04.2016
Date of Order : 25.05.2016**

In the matter of:

Determination of transmission tariff for Kurukshetra (NR) - Jalandhar 400 kV D/C (Quad) line, one ckt. via 400/220 kV Nakodar (PSTCL) Sub-station along with associated bays (2 no. GIS bays at Kurukshetra, 02 no. conventional bays at Jalandhar, 2 no. conventional bays at Nakodar, 1 no. 50 MVAR Line Reactor at Nakodar and 1 no. 50 MVAR Line Reactor at Jalandhar), LILO of Abdullapur-Sonepat 400 kV D/C (Triple) at Kurukshetra Sub-station along with associated bays (4 no. GIS Bays at Kurukshetra) and, 1 no. 400 kV 125 MVAR Bus Reactor at Kurukshetra along with 1 no. associated GIS Bay at Kurukshetra under "WR - NR HVDC Interconnector for IPP projects in Chhattisgarh" in Northern Region for 2014-19 tariff block under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the Matter of:

Power Grid Corporation of India Ltd,
SAUDAMINI, Plot No. 2,
Sector-29, Gurgaon-122001 (Haryana)

.....Petitioner

Versus

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.,
Shakti Kiran Building, Karkardooma,
Delhi – 110 092.
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 - ,
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

...Respondent(s)

The following were present:

For Petitioner: Shri Rakesh Prasad, PGCIL
Shri S.S. Raju, PGCIL
Shri Avinash M Pavgi, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Pankaj Sharma, PGCIL
Smt. Sangeeta Edwards, PGCIL
Shri V. P. Rastogi, PGCIL

For Respondents: Shri Manoj Kumar Sharma, Advocate, Rajasthan Discoms

ORDER

The petition has been preferred by Power Grid Corporation of India Limited ("the petitioner") for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") for the period from COD to 31.3.2019 in respect of Kurukshetra (NR) - Jalandhar 400 kV D/C (Quad) line, one ckt. via 400/220 kV Nakodar (PSTCL) Sub-station along with associated bays (2 nos. GIS bays at Kurukshetra, 2 nos. conventional bays at Jalandhar, 2 nos. conventional bays at Nakodar, 1 no. 50 MVAR Line Reactor at Nakodar and 1 no. 50 MVAR Line Reactor at Jalandhar), LILO of Abdullapur-Sonepat 400 kV D/C (Triple) at Kurukshetra Sub-station along with associated bays (4 nos. GIS Bays at Kurukshetra) and, 1 no. 400 kV 125 MVAR Bus Reactor at Kurukshetra along with 1 no. associated GIS Bay at Kurukshetra under "WR - NR HVDC Inter connector for IPP projects in Chhattisgarh" in Northern Region (hereinafter referred to as "the transmission asset")

2. The petitioner has been entrusted with implementation of Transmission System associated with "WR - NR HVDC Interconnector for IPP Projects in Chhattisgarh" in Northern Region. The scope of works covered under "WR - NR HVDC interconnector for IPP Projects in Chhattisgarh" in Northern Region is as follows:

Part A: WR-NR HVDC interconnector for IPP Projects in Chhattisgarh

Transmission Line:

(a) \pm 800 kV, 3000 MW HVDC bipole between Champa Pooling Station (WR) Kurukshetra (NR) [with provision to upgrade HVDC Terminal to 6000 MW at a later date]

Substation:

(a) \pm 800 kV HVDC Station

- HVDC Rectifier module of 3000 MW Capacity at Champa Pooling Station
- HVDC Inverter module of 3000 MW Capacity at Kurukshetra

(b) Establishment of 2x500 MVA, 400/220 kV Kurukshetra Sub-station (GIS) along with 125 MVAR Bus Reactor

(c) Augmentation of 765/400 kV Champa Pooling Station by 2x200 MVA 400/132/ 33 kV transformation capacity.

Part B: Transmission System Strengthening in Northern Region for IPP Projects in Chhattisgarh

Transmission Line:

(a) Kurukshetra (NR)- Jalandhar 400 kV D/C (Quad) line, one Ckt via 400/220 kV Nakodar (PSTCL) Substation.

(b) LILO of Abdullapur-Sonepat 400 kV D/C (Triple) at Kurukshetra Sub-Station

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



a) The scope of the scheme was discussed and agreed in the 28th Standing Committee Meeting dated 23.2.2010 and 16th NRPC meeting dated 4.5.2010.

b) The Investment approval and expenditure sanction to the transmission project was accorded by Board of Directors of the petitioner, vide Memorandum dated 27th March 2012 at an estimated cost of ₹956976 lakh including an IDC of ₹51177 lakh based on February 2012 price level.

4. As per the Investment Approval, the project was scheduled to be commissioned within 39 months from the date of Investment Approval. The date of Investment Approval is 26.3.2012, and accordingly the schedule date of completion of work is 25.6.2015.

5. The petition was filed based on anticipated COD of the transmission assets. Subsequently, the petitioner, vide affidavit dated 12.4.2016, has submitted the actual date of commercial operation of the assets covered in the instant petition, as below:

Asset description	Actual COD
Kurukshetra (NR) - Jalandhar 400 kV D/C (Quad) line, one ckt. via 400/220 kV Nakodar (PSTCL) Sub-station along with associated bays (2 nos. GIS bays at Kurukshetra, 2 nos. conventional bays at Jalandhar, 2 nos. conventional bays at Nakodar, 1 no. 50 MVAR Line Reactor at Nakodar and 1 no. 50 MVAR Line Reactor at Jalandhar), LILO of Abdullapur-Sonepat 400 kV D/C (Triple) at Kurukshetra Sub-station along with associated bays (4 nos. GIS Bays at Kurukshetra) and, 1 no. 400 kV 125 MVAR Bus Reactor at Kurukshetra along with 1 no. associated GIS Bay at Kurukshetra	3.12.2015

6. The petitioner has submitted, vide affidavit dated 12.4.2016, letter declaring the COD and trial operation certificate issued by RLDC in respect of commissioning of the instant transmission assets.

7. The capital cost claimed by the petitioner, as certified vide Auditor's Certificate dated 7.5.2016 along with the estimated additional capital expenditure during 2014-19 tariff period, is as below :

(₹ in lakh)

Apportioned approved cost	Capital Cost up to COD	Estimated Additional Capital Expenditure			Total Estimated Completion Cost as on 31.3.2019
		2015-16	2016-17	2017-18	
86604.26	95402.08	4674.09	5956.60	1525.71	107558.48

8. The Commission has observed that the assets covered in the instant petition are distinctly identifiable in the Scope of Works for "WR - NR HVDC interconnector for IPP Projects in Chhattisgarh" in Northern Region submitted by the petitioner vide affidavit dated 28.10.2015.

9. The Annual Transmission Charges for the instant asset was allowed under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges vide order dated 17.12.2015.

10. The petition was served on the respondents and notice of this application has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). No comments/objections have been received from the public in response to the notice in newspaper. The hearing in this matter was held on 29.4.2016.

11. Rajasthan Discoms had filed reply vide affidavit dated 27.4.2016. The petitioner was directed to submit additional information in respect of the instant transmission assets sought vide letter dated 18.12.2015 and in the Record of Proceedings for hearing dated 29.4.2016. In response, the petitioner has filed the rejoinder vide affidavit dated 12.4.2016, 5.5.2016 and 13.5.2016.

12. Having heard the representatives of the petitioner and respondents, and perused the material on record, we proceed to determine the tariff in accordance with the Tariff Regulations, 2014.

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

(₹ in lakh)

Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Depreciation	1656.36	5325.68	5514.80	5550.81
Interest on Loan	1165.93	3616.94	3459.29	3156.09
Return on Equity	1894.89	6092.06	6313.22	6358.32
Interest on Working Capital	125.34	398.85	406.42	403.12
O & M Expenses	303.33	955.51	987.30	1020.10
Total	5145.85	16389.04	16681.03	16488.44

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

(₹ in lakh)

Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
O&M Expenses	77.08	79.63	82.28	85.01
Maintenance Spares	138.74	143.33	148.10	153.02
Receivables	2615.10	2731.51	2780.17	2748.07
Total working capital	2830.92	2954.46	3010.54	2986.10
Rate of Interest	13.50	13.50	13.50	13.50
Interest on working capital	125.34	398.85	406.42	403.12

Date of Commercial Operation (COD)

15. The petitioner has claimed the date of the commercial operation for the instant transmission asset as 3.12.2015. Regulation 4(3) of the 2014 Tariff Regulations provides as follows:-

“4. Date of Commercial Operation: The date of commercial operation of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:

xxx

(3) Date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end:

xxx
xxx”

16. The petitioner, vide affidavit dated 12.4.2016, has submitted the RLDC certificates in support of the claim of commercial operation in accordance with Regulation 5(2) of the 2014 Tariff Regulations indicating completion of successful trial operation for the instant transmission asset. Accordingly, the commercial operation date of the transmission asset is considered as 3.12.2015 and the tariff is worked out for the asset from its COD to 31.3.2019.

Capital Cost

17. The petitioner has claimed the capital cost as mentioned in Para 7 supported by Auditor’s Certificate dated 7.5.2016, after adjusting the interest during construction (IDC) and incidental expenditure during construction (IEDC) as discharged on cash basis. The total capital cost up to 31.3.2019 includes the IDC, IEDC, capitalized spares and estimated additional capital expenditure from COD to 31.3.2019. The capital cost along with estimated additional capital expenditure during the 2014-19 tariff period is as below:

(₹ in lakh)

AppORTIONED approved cost	Capital Cost up to COD	Estimated Additional Capital Expenditure			Total Estimated Completion Cost as on 31.3.2019
		2015-16	2016-17	2017-18	
86604.26	95402.08	4674.09	5956.60	1525.71	107558.48

18. Regulation 9 (1) and (2) and 10 (1) of the 2014 Tariff Regulations specify as follows:-

“9. Capital Cost: (1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.

(2) The Capital Cost of a new project shall include the following:

- a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;
- b) Interest during construction and financing charges, on the loans (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;
- c) Increase in cost in contract packages as approved by the Commission;
- d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;
- e) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;
- f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;
- g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and
- h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.”

“10. Prudence Check of Capital Expenditure: The following principles shall be adopted for prudence check of capital cost of the existing or new projects:

(1) In case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out taking into consideration the benchmark norms specified/to be specified by the Commission from time to time:

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

19. The admissible capital cost of the transmission asset as on COD is worked out in the subsequent paragraphs taking into consideration the initial spares and IEDC and IDC amount.

Cost over-run

20. As per the initial petition submitted vide affidavit dated 28.10.2015, the approved cost of the transmission asset is ₹86604.26 lakh. The capital cost on COD is ₹95402.08 lakh and the estimated completion cost is ₹107558.48 lakh. It is observed that the capital cost on COD exceeds the apportioned approved cost of ₹86604.26 lakh. Hence, there is cost over-run.

21. Rajasthan Discoms have submitted that the petitioner has not submitted the Revised Cost Estimates approved by the concerned authority to justify the cost overrun. The petitioner has replied stating that the RCE is under approval and shall be submitted shortly.

22. We have considered the submissions of the petitioner and the respondent. The petitioner has not submitted any reasons for cost over-run. Accordingly, the capital cost in respect of the transmission assets is restricted to ₹86604.26 lakh. However, liberty is given to the petitioner to submit the detailed justification for cost over-run in case of the transmission assets for consideration of the Commission at the time of truing up.

Time Over-run

23. As per the Investment Approval, the project was scheduled to be commissioned within 39 months from the date of Investment Approval. The date of Investment

Approval is 26.3.2012 and accordingly the schedule date of completion of work is 25.6.2015. Against the scheduled completion date of 25.6.2015, the asset has been commissioned on 3.12.2015. Thus, there is time overrun of 160 days. The petitioner has submitted following reasons to justify the time overrun:

Delay due to ROW:

24. The petitioner has submitted that the construction work of Kurukshetra (NR)-Jalandhar 400 kV D/C (Quad) line was going at various locations of Haryana and Punjab during September 2013 until ROW issue was faced at various locations in Patiala, Fatehgarh Sahib area of Punjab. The locals from the region did not allow entry of officials into their fields due to which the progress of the project was affected. Stiff resistance was faced in spite of regular compensation made for the damages of crops/trees to the owners in the villages of Shera, Takhtumajra, Rajindergarh, Mahadian, Fatehpur, and Bahadurgarh which are under the administrative control of SDM, Fatehgarh Sahib. The Deputy Commissioner of Fatehgarh Sahib directed the petitioner to approach the concerned SDM for getting the issue resolved.

25. The petitioner, vide letter dated 24.1.2014, requested SDM of Fatehgarh Sahib (Punjab) to take necessary action so that the work could be started again. Locals of Gaspura village threatened the staff of petitioner and damaged the executed work of Kurukshetra (NR) - Jalandhar 400 kV D/C (Quad) line. The Deputy Commissioner, Patiala directed SSP Patiala, vide letter dated 5.3.2014 to provide police protection at work site which was provided on 28.5.2014 under the supervision of Distt. Magistrate.



26. The petitioner has submitted that various tower locations were affected due to hindrance by owners (local villagers) of the fields in various locations in Fatehgarh Sahib. Further, the work on various line sections was also affected in some villages of Patiala and Fatehgarh Sahib due to ROW issues. The petitioner has submitted that total 19.487 km length of the line was affected which caused further delay in commissioning of the line. The petitioner, vide letter dated 17.3.2014, requested SDM to provide police help to sort out the issue in these locations. Owing to difficulty in controlling the damage caused by locals, the DM advised to suspend work until further instruction were issued. Subsequently, the CMD (POWERGRID), vide letter dated 25.7.2014 requested the Hon'ble Chief Minister of Punjab to direct Deputy Commissioners of Patiala and Fatehgarh Sahib to provide to resolve these issues. The petitioner has further submitted the news paper cuttings to depict that the work was stalled due to hindrance caused by locals. The petitioner has placed on record following chronology of events leading to the delay caused as below:

Activity- Construction of 400KV D/C Kurukshetra-Jalandhar Transmission Line	Date	Remarks
Work Started in Punjab	Sep 2013	
Start of Resistance in Patiala District	Dec 2013	Intimation to district administration
Instructions issued by DC Patiala to SDM Rajpura	Dec 2013	
POWERGRID official to SDM		To resolve ROW issues in various location
Recommendations of SDM Rajpura for enhancement of compensation amount	Feb 2014	SDM recommended enhancement of compensation by 30% and forwarded to DC Patiala for approval
Manhandling by members of Tower committee at location No 42/0	Feb 2014	During work execution manhandling was done by committee members for which complaint is still pending at PS Bahadurqarh

Activity- Construction of 400KV D/C Kurukshetra-Jalandhar Transmission Line	Date	Remarks
Approval of DC Patiala to enhance compensation	Feb 2014	Enhancement of compensation approved by DC Patiala
Order of DC Patiala for Police Protection at work site. (Police protection was provided on 28.5.14 under supervision of Duty Magistrate.)	Mar 2014	DC Patiala directed SSP Patiala to provide Police Protection at work site located in village Gospura in Patiala Tehsil
POWERGRID Official to SDM (Fatehgarh Sahib)	Mar 2014	Request to provide Police help against locals
Directions of Duty Magistrate to keep work suspended till further instructions.	May 2014	Joint statement recorded by Duty Magistrate

27. Based on the above submissions, the petitioner has claimed that the delay was beyond the control of petitioner and has prayed to the Commission to condone the delay in completion of subject assets on merit of the same being out of the control of petitioner in line with CERC Regulations'2014 12(2)(i) "uncontrollable factors".

28. Rajasthan Discoms have submitted that the petitioner had applied for police protection on 5.3.2014 and the same was provided on 28.5.2014. The petitioner was not vigilant and the beneficiaries cannot be burdened because of this delay. Further, as per Regulation 12 of the 2014 Tariff Regulations, the land acquisition proceedings are controllable factor. Hence no benefit of the same would be admissible to the petitioner. The petitioner has filed rejoinder vide affidavit dated 5.5.2016 submitting reasons for the time overrun.

29. We have considered the submissions of the petitioner and the respondent. The petitioner has submitted documentary evidence in respect of the communication held towards resolution of the issues vide letters dated 24.1.2014, 25.7.2014, 17.3.2015 and few news paper cuttings. As seen in the aforesaid submission of the petitioner,

as also in the chronology of events, the communication towards resolution of issues lasted between 24.1.2014 to 25.7.2014.

30. The land acquisition issues are to be examined on a case to case basis. In the instant case, there were ROW problems in many locations which prevented the petitioner from completing the line within the specified timeline and having perused the documents and the submission made by the petitioner, we are of the view that the time over-run is beyond the control of the petitioner and it cannot be attributed to the petitioner. Thus, the time overrun of 160 days is being condoned in the present case.

Interest during construction (IDC)

31. The details of IDC discharged on cash basis as submitted by the petitioner vide affidavit dated 13.5.2016 are as below:-

(₹ in lakh)	
IDC	IDC
Discharged up to COD	7416.71
Accrual IDC (discharged during 2015-16)	1052.49
Accrual IDC (discharged during 2016-17)	504.92
Total IDC	8974.13

The petitioner has adjusted the IDC discharged on cash basis for the tariff computation purpose. The capital cost on COD is worked out based on the IDC adjusted on cash basis.

Initial Spares

32. The petitioner has claimed initial spares of ₹836.61 lakh and ₹262.87 lakh pertaining to transmission line and sub-station, corresponding to capital cost of

₹77557.33 lakh and ₹25404.20 lakh respectively (excluding IDC, IEDC, Land cost and cost of civil works) up to the cut-off date of 31.3.2018.

33. It is observed that in the affidavit dated 13.5.2016 the petitioner has erred in considering the capital cost for computation of initial spares in respect of the sub-station. Subsequently, the petitioner has re-submitted the cost to be considered for initial spares computation for the sub-station. The allowable initial spares have been computed based on the norms in accordance with clause 13 of Tariff Regulations 2014, as below:

(₹ in lakh)

Particulars	Transmission line	Substation
Capital cost up to cut-off date	84569.14	17681.96
P&M Cost as per Auditor's Certificate (exc. IDC, IEDC, civil works)	77557.32	14141.35
Initial Spares Claimed (as submitted vide Auditor's certificate)	836.61	262.87
P&M Cost upto 31.3.2019 after restricting it to approved cost (exc. IDC, IEDC, civil works)	71126.88	11309.71
Proportionate initial spares worked out	767.24	210.23
Ceiling limit as per 2014 Regulation	1.00%	5.00%
	710.70	584.18
Excess initial spares	56.54	0.00

34. The initial spares claimed by the petitioner are within the normative limits in respect of sub-station and are in excess of ₹56.54 lakh in transmission line. Thus, the same is being considered for computation of tariff.

35. Based on the above, capital costs considered as on COD, after capitalization of IDC, IEDC and initial spares for the purpose of the determination of transmission tariff are as below:-

(₹ in lakh)

Particulars	Capital cost claimed as on COD	IDC discharged during 2015-16	Capital cost on cash basis	Capital cost on restricting to the approved cost	Capital cost considered for tariff computation after deducting the excess initial spares
Land - Freehold	1175.32		1175.32	1049.80	1049.80
Land - Leasehold			0.00	0.00	0.00
Building Civil Works & Colony	3041.55	49.45	2992.10	2716.71	2716.71
Transmission Line	76675.58	1246.71	75428.87	68486.66	68430.12 (68486.66-56.54)
Sub Station	14964.52	243.32	14721.20	13366.32	13366.32
PLCC	1102.52	17.93	1084.59	984.77	984.77
Total	96959.49	1557.41	95402.08	86604.26	86547.72

Additional Capital Expenditure

36. Clause (1) of Regulation 14 of the 2014 Tariff Regulations provides as under:-

“(1) The capital expenditure in respect of the new project or an existing project 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 recognized to be payable at a future date;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and
- (v) Change in law or compliance of any existing law.”

37. Clause 13 of Regulation 3 of the 2014 Tariff Regulations defines cut-off date as follows:-

“Cut-off Date” means 31st March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of a year, the cut

- off date shall be 31st March of the year closing after three years of the year of commercial operation:

Provided that the cut-off date may be extended by the Commission if it is proved on the basis of documentary evidence that the capitalisation could not be made within the cut-off date for reasons beyond the control of the project developer ”

38. The petitioner has claimed an estimated additional capital expenditure of ₹4674.09 lakh, ₹5956.60 lakh and ₹1525.71 lakh during 2014-19 tariff period, on account of balance and retention payments.

39. Since the capital cost on COD has been restricted to the approved cost of ₹86604.26 lakh, the additional capital expenditure is inadmissible at this stage. The petitioner is at liberty to claim the same on actual basis at the time of truing up, subject to availability of Revised Cost Estimates (RCE) for the project.

Debt: Equity

40. Clause (1) of Regulation 19 of the 2014 Tariff Regulations provides as under:-

“19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. 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:

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.”

The petitioner has considered debt: equity ratio of 70.00:30.00 on COD which is in line with the 2014 Tariff Regulations, hence the same is considered for calculation of tariff.

41. Accordingly, the details of the debt:equity considered for the purpose of tariff for 2014-19 tariff period is as follows:-

(₹ in lakh)

Funding	As on COD	(%)	Additional capital expenditure during 2014-19	(%)	As on 31.3.2019	(%)
Debt	60583.40	70.00	0.00	0.00	60583.40	70.00
Equity	25964.32	30.00	0.00	0.00	25964.32	30.00
Total	86547.72	100.00	0.00	0.00	86547.72	100.00

Return on Equity (“ROE”)

42. Clause (1) and (2) of Regulations 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specify as under:-

“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.
(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system....”

“25. Tax on Return on Equity:

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

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

Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.”

43. The petitioner has claimed ROE at the rate of 20.961% during 2014-15 and at 21.342% during 2015-2019 after grossing up the ROE of 15.5% with MAT rate as per the above said Regulation. The petitioner has further submitted that the grossed up ROE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from

IT authorities, pertaining to the tariff period 2014-19 on actual gross income of any financial year. Any under-recovery or over-recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

44. The petitioner has further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of the tax including interest received from IT authorities shall be recoverable/ adjustable after completion of income tax assessment of the financial year.

45. We have considered the submissions made by the petitioner. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. The ROE allowed for the instant transmission asset is given below:-

(₹ in lakh)

Return on Equity	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Equity	25964.32	25964.32	25964.32	25964.32
Additions	0.00	0.00	0.00	0.00
Closing Equity	25964.32	25964.32	25964.32	25964.32
Average Equity	25964.32	25964.32	25964.32	25964.32
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	21.342	21.342	21.342	21.342

Return on Equity	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Rate of Return on Equity (%)	19.705	19.705	19.705	19.705
Return on Equity	1677.50	5116.39	5116.39	5116.39

Interest on Loan (“IoL”)

46. Clause 5 and 6 of Regulation 26 of 2014 Tariff Regulations provides that:-

“(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

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.”

47. We have considered the weighted average rate of IOL on the basis of rate prevailing as on 1.4.2014. Further, the petitioner has prayed to allow it to bill and adjust impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2014-19 period, if any from the respondents. The petitioner has also prayed that they will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The petitioner’s prayer to bill and adjust the impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2014-19 period from the respondents will be considered at the time of truing up. The details of weighted average rate of interest are placed at Annexure-I and the IOL has been worked out as follows:-

(₹ in lakh)

Interest on Loan	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Gross Normative Loan	60583.40	60583.40	60583.40	60583.40
Cumulative Repayment upto Previous Year	0.00	1466.21	5938.13	10410.06
Net Loan-Opening	60583.40	59117.20	54645.27	50173.35
Additions	0.00	0.00	0.00	0.00
Repayment during the year	1466.21	4471.93	4471.93	4471.93
Net Loan-Closing	59117.20	54645.27	50173.35	45701.42
Average Loan	59850.30	56881.23	52409.31	47937.38
Weighted Average Rate of Interest on Loan (%)	5.2599	5.3332	5.3206	5.2585
Interest on Loan	1032.15	3033.60	2788.47	2520.79

Depreciation

48. Clause (2), (5) and (6) of Regulation 27 of 2014 Tariff Regulations provide that:-

"27. Depreciation:

...(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. 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

...

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II 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 the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets."

49. Clause (67) of Regulation 3 of the 2014 Tariff Regulations defines useful life as follows:-

"(67) '**Useful life**' in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:

(a) Coal/Lignite based thermal generating station 25 years

- (b) Gas/Liquid fuel based thermal generating station 25 years
- (c) AC and DC sub-station 25 years
- (d) Gas Insulated Substation (GIS) 25 years
- (d) Hydro generating station including pumped Storage hydro generating stations 35 years
- (e) Transmission line (including HVAC & HVDC) 35 years
- (f) Communication system 15 years”

50. The depreciation has been worked out considering the admitted capital cost as on COD and the additional capital expenditure admitted during 2014-19 period. The weighted average useful life of the asset has been considered as 29 years in accordance with the above regulation. The detailed calculations for depreciation for the transmission asset are worked out and allowed as follows:-

(₹ in lakh)

Depreciation	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Gross Block	86547.72	86547.72	86547.72	86547.72
Additional Capitalization	0.00	0.00	0.00	0.00
Closing Gross Block	86547.72	86547.72	86547.72	86547.72
Average Gross Block	86547.72	86547.72	86547.72	86547.72
Rate of Depreciation (%)	5.17	5.17	5.17	5.17
Balance Useful life of the asset	33	32	31	30
Elapsed life	0	1	2	3
Remaining Depreciable Value	76948.13	75481.92	71010.00	66538.07
Depreciation during the year	1466.21	4471.93	4471.93	4471.93
Cumulative depreciation (incl. of AAD)	1466.21	5938.13	10410.06	14881.98

Operation & Maintenance Expenses (“O&M Expenses”)

51. The petitioner has claimed O&M Expenses as specified in sub-clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations. The details of O&M Expenses allowed are given hereunder:-

Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
400 kV GIS bay				
Nos.	7	7	7	7
Norms (₹ lakh/bay)	53.25	55.02	56.84	58.73
Total O&M Expenses (₹ lakh)	372.75	385.14	397.88	411.11
400 kV bay				
Nos.	4	4	4	4
Norms (₹ lakh/bay)	62.3	64.37	66.51	68.71
Total O&M Expenses (₹ lakh)	249.2	257.48	266.04	274.84
D/C twin/triple cond.				
KMs	16.00	16.00	16.00	16.00
Norms (₹ lakh/KM)	0.731	0.755	0.78	0.806
Total O&M Expenses (₹ lakh)	11.70	12.08	12.48	12.90
M/C twin/triple cond.				
KMs	265.50	265.50	265.50	265.50
Norms (₹ lakh/KM)	1.097	1.133	1.171	1.21
Total O&M Expenses (₹ lakh)	291.25	300.81	310.90	321.26
Total O&M Expenses (₹ lakh)	303.25	955.51	987.30	1020.10

52. The petitioner has submitted that norms for O&M Expenses for the tariff period 2014-19 have been arrived on the basis of normalized actual O&M Expenses during the period 2008-13. The petitioner has further submitted that the wage revision of the employees of the petitioner is due during the 2014-19 tariff period and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 2014-19. The petitioner has prayed to be allowed to approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

53. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, any

application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

Interest on Working Capital

54. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specifies as follows:

“28. Interest on Working Capital

- (c).(i) Receivables equivalent to two months of fixed cost;
(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and
(iii) Operation and maintenance expenses for one month”

“(5) ‘Bank Rate’ means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;”

55. The petitioner has considered the rate of interest on working capital to be 13.50%.

56. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The components of the working capital and interest thereon have been worked as follows:-

(₹ in lakh)

Interest on Working Capital	2015-16 (pro-rata)	2016-17	2017-18	2018-19
O & M expenses	77.07	79.63	82.28	85.01
Maintenance Spares	138.73	143.33	148.10	153.02
Receivables	2334.26	2320.12	2283.92	2244.05
Total	2550.07	2543.08	2514.29	2482.07
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest on Working Capital	112.87	343.32	339.43	335.08

ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD

57. The transmission charges allowed for the instant transmission assets for the 2014-19 tariff period are summarised below:-

(₹ in lakh)

Particulars	2015-16	2016-17	2017-18	2018-19
Depreciation				
Opening Gross Block	86547.72	86547.72	86547.72	86547.72
Additional Capitalisation	0.00	0.00	0.00	0.00
Closing Gross Block	86547.72	86547.72	86547.72	86547.72
Average Gross Block	86547.72	86547.72	86547.72	86547.72
Rate of Depreciation	5.17	5.17	5.17	5.17
Depreciable Value	76948.13	76948.13	76948.13	76948.13
Balance Useful life of the asset	33	32	31	30
Elapsed Life	0	1	2	3
Remaining Depreciable Value	76948.13	75481.92	71010.00	66538.07
Depreciation	1466.21	4471.93	4471.93	4471.93
Cumulative depreciation	1466.21	5938.13	10410.06	14881.98
Interest on Loan				
Gross Normative Loan	60583.40	60583.40	60583.40	60583.40
Cumulative Repayment upto Previous Year	0.00	1466.21	5938.13	10410.06
Net Loan-Opening	60583.40	59117.20	54645.27	50173.35
Additions	0.00	0.00	0.00	0.00
Repayment during the year	1466.21	4471.93	4471.93	4471.93
Net Loan-Closing	59117.20	54645.27	50173.35	45701.42
Average Loan	59850.30	56881.23	52409.31	47937.38
Weighted Average Rate of Interest on Loan	5.2599	5.3332	5.3206	5.2585
Interest	1032.15	3033.60	2788.47	2520.79
Return on Equity				
Opening Equity	25964.32	25964.32	25964.32	25964.32
Additions	0.00	0.00	0.00	0.00
Closing Equity	25964.32	25964.32	25964.32	25964.32
Average Equity	25964.32	25964.32	25964.32	25964.32
Return on Equity (Base Rate)	15.500	15.500	15.500	15.500
MAT rate for the respective year	21.342	21.342	21.342	21.342
Rate of Return on Equity	19.705	19.705	19.705	19.705
Return on Equity	1677.50	5116.39	5116.39	5116.39
Interest on Working Capital				
O & M expenses	77.07	79.63	82.28	85.01
Maintenance Spares	138.73	143.33	148.10	153.02
Receivables	2334.26	2320.12	2283.92	2244.05
Total	2550.07	2543.08	2514.29	2482.07



Particulars	2015-16	2016-17	2017-18	2018-19
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest on working capital	112.87	343.32	339.43	335.08
Annual Transmission Charges				
Depreciation	1466.21	4471.93	4471.93	4471.93
Interest on Loan	1032.15	3033.60	2788.47	2520.79
Return on Equity	1677.50	5116.39	5116.39	5116.39
Interest on Working Capital	112.87	343.32	339.43	335.08
O & M Expenses	303.25	955.51	987.30	1020.10
Total	4591.98	13920.74	13703.51	13464.29

Filing Fee and the Publication Expenses

58. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 52 (1) of the 2014 Tariff Regulations.

Licence Fee & RLDC Fees and Charges

59. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 52 (2) (b) of the 2014 Tariff Regulations for 2014-19 tariff period. The petitioner shall also be entitled for recovery of RLDC fee & charges in accordance with Regulations 52 (2) (a) of the 2014 Tariff Regulations for 2014-19 tariff period.

Service Tax

60. The petitioner has prayed for reimbursement of service tax if it is subjected to such tax in future. We are of the view that the petitioner's prayer is premature.

Foreign Exchange Rate Variation

The petitioner has sought recovery of FERV on foreign loans deployed under clause 50 of 2014 Tariff Regulations. The petitioner is entitled to recover the FERV directly

from the beneficiaries or the long term transmission customers / DICs, as the case may be, in accordance with Regulation 51(1) of the 2014 Tariff Regulations.

Sharing of Transmission Charges

61. 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 as provided in Regulation 43 of the 2014 Tariff Regulations.

62. This order disposes of Petition No. 256/TT/2015.

Sd/-
(Dr. M.K. Iyer)
Member

Sd/-
(A.S. Bakshi)
Member

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO FOR 2014-19

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2016	Additions during the tariff period	Total
BOND XXXIX	9.40	1200.00	0.00	1200.00
BOND - XLII	8.80	9000.00	0.00	9000.00
BOND - XLIII - CHILD 1	7.93	6500.00	0.00	6500.00
BOND -XLV	9.65	1000.00	0.00	1000.00
BOND - XLIV - CHILD 1	8.70	4336.00	0.00	4336.00
BOND XLVI	9.30	950.00	0.00	950.00
Interest on Loan BOND XLVII	8.93	179.06	0.00	179.06
SBI 10000 (01.05.2014)	9.55	850.00	0.00	850.00
Proposed Loan 2015-16 (Bond L)	8.40	251.52	0.00	251.52
Proposed Loan 2015-16 (Bond L)	8.40	0.00	736.75	736.75
SBI 2014-15	9.95	1000.00	0.00	1000.00
SBI Loan (Oct 2013- Dec 2013) - Child 1	10.10	1158.87	0.00	1158.87
ADB VII	1.78	20178.00	0.00	20178.00
ADB VIII	3.89	20178.00	0.00	20178.00
Bond LI	8.40	0.00	2535.12	2535.12
Total		66781.45	3271.87	70053.32

WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2014-19 TARIFF PERIOD

(₹ in lakh)

	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	66781.45	70053.32	70053.32	70053.32
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	625.00
Net Loans Opening	66781.45	70053.32	70053.32	69428.32
Add: Draw(s) during the Year	3271.87	0.00	0.00	0.00
Less: Repayments of Loan during the year	0.00	0.00	625.00	2085.25
Net Closing Loan	70053.32	70053.32	69428.32	67343.07
Average Net Loan	68417.39	70053.32	69740.82	68385.70
Rate of Interest on Loan (%)	5.2599%	5.3332%	5.3206%	5.2585%
Interest on Loan	3598.68	3736.10	3710.60	3596.07