

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 254/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 2019 for 400 kV D/C Lara STPS-1 to Raigarh (Kotra) PS Transmission Line along with associated bays at Raigarh (Kotra) PS under "Transmission System associated with Lara STPS - I (2x800 MW) Generation Project of NTPC" in Western Region for the 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and 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 -122 001 (Haryana).

.....**Petitioner**

**Versus**

1. NTPC Ltd., NTPC Bhawan  
Core-7, Scope Complex  
7, Institutional Area, Lodhi Road  
New Delhi — 110003
2. Madhya Pradesh Power Trading Company Limited  
Shakti Bhawan, Rampur  
Jabalpur - 482 008
3. Maharashtra State Electricity Distribution Co. Ltd.  
Prakashgad, 4th Floor  
Andheri (East), Mumbai - 400 052



4. Gujarat Urja Vikas Nigam Ltd.  
Sardar Patel Vidyut Bhawan,  
Race Course Road  
Vadodara - 390 007
5. Electricity Department Govt. of Goa  
Vidyut Bhawan, Panaji,  
Near Mandvi Hotel, Goa - 403 001
6. Electricity Department  
Administration of Daman & Diu  
Daman - 396 210
7. Electricity Department  
Administration of Dadra Nagar Haveli  
U.T., Silvassa - 396 230
8. Chhattisgarh State Electricity Board  
P.O.Sunder Nagar, Dangania, Raipur  
Chhatisgaarh-492013
9. Madhya Pradesh Audyogik Kendra  
Vikas Nigam (Indore) Ltd.  
3/54, Press Complex, Agra-Bombay Road,  
Indore-452 008

**....Respondents**

The following were present:-

For Petitioner: Shri S. S. Raju, PGCIL  
Shri Avinash M Pavgi, PGCIL  
Shri M. M. Mondal, PGCIL  
Shri Rakesh Prasad, PGCIL  
Shri Pankaj Sharma, PGCIL  
Shri Mohd Mohsin, PGCIL

For Respondent: Shri Ajay Dua, NTPC  
Shri Manish Jain, NTPC



## ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner") for determination of tariff for 400 kV D/C Lara STPS-1 to Raigarh (Kotra) PS Transmission Line along with associated bays at Raigarh (Kotra) PS under "Transmission System associated with Lara STPS - I (2x800 MW) Generation Project of NTPC" in Western Region under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") for the period from date of commercial operation to 31.3.2019.

2. The respondents are distribution licensees or electricity departments or power procurement companies of States, who are procuring transmission service from the petitioner, mainly beneficiaries of Western Region.

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

(a) The investment approvals for the project was accorded by Board of Directors of the petitioner company, vide Memorandum C/CP/Investment/Lara-I dated 24.06.2014 with an estimated cost of ₹ 40047 lakh including IDC of ₹2464 lakh, based on price level of Feb-2014. The total approved apportioned cost for the instant assets is ₹5063.62 lakh.



(b) The scope of work covered under “Transmission System associated with Lara STPS - I (2x800 MW) Generation Project of NTPC” in Western Region is as follows:-

**Transmission line**

- (i) Lara STPS-1 - Raigarh (Kotra) 400 kV D/C Line : 18 km
- (ii) Lara STPS-1 - Champa Pooling Station 400 kV D/C (Quad) Line : 112 km

**Substations:**

- (i) Extension of 400 kV Raigarh (Kotra) (POWERGRID) substation - 400 kV Line bays : 2 Nos.
- (ii) Extension of 400 kV Champa (POWERGRID) substation- 400 kV Line bays : 2 Nos.

(c) The transmission charges claimed by the petitioner are as under:-

(₹ in lakh)			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	173.30	235.34	247.88
Interest on Loan	201.53	255.91	249.42
Return on Equity	198.03	267.61	281.85
Interest on Working Capital	20.31	25.59	26.33
O&M Expenses	128.94	147.06	151.93
<b>Total</b>	<b>722.11</b>	<b>931.51</b>	<b>957.41</b>

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

(₹ in lakh)			
Particulars	2016-17	2017-18	2018-19
O & M Expenses	11.86	12.26	12.66
Maintenance Spares	21.35	22.06	22.79
Receivables	132.85	155.25	159.57
Total	166.06	189.57	195.02
Rate of Interest (%)	13.50	13.50	13.50
<b>Interest (pro-rata)</b>	<b>20.31</b>	<b>25.59</b>	<b>26.33</b>



4. The annual fixed charges for the instant assets were allowed under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges vide order dated 17.12.2015 based on the actual COD. The petitioner has submitted the IDC on cash basis, Auditor Certificates and tariff forms and the same has been considered for the purpose of computation of tariff.

5. The petitioner has served the petition to the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 (“the Act”). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. The hearing in this matter was held on 29.4.2016. NTPC Ltd. (hereinafter referred to as “NTPC”), Respondent No. 1 has filed its reply vide affidavit dated 17.12.2015. The petitioner has not submitted the rejoinder to the reply filed by NTPC.

#### **Commercial Operation Date (“COD”)**

6. 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

(ii) in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof.

xxx

7. The petitioner has submitted that COD of Asset-1 is 20.10.2014, Asset-2 is 5.5.2016 and has sought approval of COD in accordance with Regulation 4 (3) (ii) of the Tariff Regulations 2014.

8. NTPC in its reply vide affidavit dated 17.12.2015 submitted that NTPC Lara line bay at switchyard was ready for termination of the instant line and necessary power flow required for trial operation of the line shall also be feasible by the month end of January, 2016 i.e. anticipated COD of the instant line, therefore there is no need to invoke Regulation 4(3)(ii) of Tariff Regulation 2014 for declaration of commercial operation of the line.

9. We have considered the submission of the petitioner. The petitioner has submitted that asset was put under actual commercial operation on **5.5.2016**. The petitioner has also submitted the letter declaring COD, however the RLDC trial run certificate has not been submitted by the petitioner in support of claim of commercial operation. As per the submission of the NTPC Ltd., the bay at generating station would be ready as per the anticipated COD of the subject



transmission asset and the power flow would take place for drawl of start up power. We have observed that the NTPC ltd has planned the commissioning of bays in such a way as to facilitate the petitioner to put the assets in regular service. We have considered the COD as submitted by the petitioner subject to submission of RLDC certificate at the time of true up. Accordingly, the commercial operation date considered for the instant asset is 5.5.2016. The tariff is worked out for the instant assets from the COD to 31.3.2019.

### **Capital Cost**

10. The petitioner has claimed the capital cost ₹3180.20 lakh as on actual COD. In the auditor certificate and tariff forms, the petitioner has claimed the following cost:-

(₹ in lakh)

Asset	Approved Apportioned cost	Exp. up to COD	Additional Capital Expenditure			Estimated completion Cost
			2016-17	2017-18	Total	
Asset	5063.62	3180.20	1105.89	481.73	1587.62	4767.82

11. Regulation 9 (1), 9(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.”

### **IDC and IEDC**

12. As per investment approval, the schedule completion is within 34 months progressively from the date of investment approval. The date of investment approval is 24.6.2014, hence, the schedule commissioning works out to be 24.4.2017 against which the subject is commissioned on 5.5.2016. Therefore, the subject transmission assets have been commissioned within time line.

13. The assets have been commissioning within the schedule The petitioner, vide Auditor’s certificates dated 16.5.2016, has submitted the IDC and IEDC up to COD for the instant transmission assets as given hereunder:





(₹ in lakh)

Asset	IEDC up to COD	IDC up to COD
Asset	155.88	83.50

14. The petitioner has submitted that entire IEDC has been discharged up to COD. The IDC discharged on cash basis is as below:

(₹ in lakh)

Asset	IDC discharged upto COD	IDC discharged during 2016-17
Asset	12.79	70.71

15. For determination of tariff for the 2014-19 tariff period for the instant transmission assets we have considered the capital cost as on COD after adjusting the IDC and IEDC discharged on cash basis.

16. Based on the above submissions of the petitioner, IDC is being capitalised and IDC discharged during 2016-17 has been added to the additional capital expenditure during 2016-17. Capital Cost after adjustment of IDC is as follows:-

(₹ in lakh)

Admitted Capital Cost	Capital Cost claimed as on COD	Apportioned IDC (adjusted on cash basis)	Capital cost as on COD
Land - Freehold	0.00	0.00	0.00
Land - Leasehold	0.00	0.00	0.00
Building Civil Works & Colony	230.72	5.13	225.59
Transmission Line	1850.60	41.15	1809.45
Sub Station	1098.88	24.43	1074.45
PLCC	0.00	0.00	0.00
<b>Total</b>	<b>3180.20</b>	<b>70.71</b>	<b>3109.49</b>



### Initial Spares

17. The petitioner has claimed initial spares as ₹82.02 lakh with regard to Sub-station. Regulation 13 of the 2014 Tariff Regulations provide for ceiling norms for capitalization of initial spares. The computation of the admissible initial spares is as under:-

(₹ in lakh)

<b>Particulars (As per Auditor's Certificate)</b>	<b>Sub-station</b>	<b>Transmission Line</b>
Capital Cost upto cut-off date (excluding IDC, IEDC and land and cost of civil works)	1356.47	2895.68
Initial Spares Claimed	82.02	0.00
Norms	6%	1%
Initial Spares as per Norms	81.35	29.25
<b>Excess Initial Spares</b>	<b>0.67</b>	<b>0.00</b>

18. As per Regulation 13 of the 2014 Tariff Regulation, The total initial spares for Sub-station are in excess by ₹0.67 lakh, Hence it is deducted from the capital cost. The capital cost as on COD considered for the purpose of computation of tariff as follows:-

(₹ in lakh)

<b>Particulars</b>	<b>Asset</b>
Capital cost as on COD (cash basis)	3180.20
IDC and IEDC disallowed	70.71
Excess initial spares	0.67
Capital cost as on COD considered for tariff determination	3108.82

### Additional Capital Expenditure



19. The petitioner has proposed additional capitalization of ₹1105.89 lakh for 2016-17 and ₹481.73 lakh for 2017-18 towards balance and retention payment under Regulation 14(1) (i) of 2014 Tariff Regulations.

20. Clause (13) of Regulation 3 of the 2014 Tariff Regulations defines “cut-off” date as under:-

“cut-off date” means 31<sup>st</sup> 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 the year, the cut-off date shall be 31<sup>st</sup> 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;”

21. The cut-off date of the transmission asset is 31.3.2019. It is observed that total estimated completion cost of ₹4767.15 lakh (including the additional capitalization of ₹1658.33 lakh) for instant asset lies within the approved apportioned cost. Accordingly, additional capitalization for the subject asset is allowed under Regulation 14(1)(i) of 2014 Tariff Regulations.

(in ₹ lakh)

Particulars	Approved cost for the project	Exp Up to DOCO	Additional capital expenditure			Estimated completion cost
			2016-17	2017-18	Total	
Asset	5063.62	3108.82	1,176.60	481.73	1,658.33	4767.15

### **Debt: Equity Ratio**

22. Regulation 19 (1) of the 2014 Tariff Regulations specifies 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.”

23. The petitioner has considered debt:equity ratio as 70:30 as on COD and debt:equity ratio as 70:30 for additional capitalization during 2015-16. Accordingly, we have considered the same for the purpose of tariff computation for the 2014-19 tariff period is as follows:-

(₹ in lakh)

Particulars	As on COD		Additional capitalization during 2014-19		As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
<b>Debt</b>	2176.17	70.00	1160.83	70.00	3337.00	70.00
<b>Equity</b>	932.65	30.00	497.50	30.00	1430.14	30.00
<b>Total</b>	<b>3108.82</b>	<b>100.00</b>	<b>1658.33</b>	<b>100.00</b>	<b>4767.15</b>	<b>100.00</b>

### Interest on Loan (“IOL”)

24. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations provides as under:-

“(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.”

25. 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)			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Gross loan opening	2176.17	2999.79	3337.00
Cumulative Repayment up to previous year	0.00	173.45	408.76
Net Loan-Opening	2176.17	2826.34	2928.24
Additions during the year	823.62	337.21	0.00
Repayment during the year	173.45	235.31	247.85
Net Loan-Closing	2826.34	2928.24	2680.40
Average Loan	2501.26	2877.29	2804.32
Rate of Interest (%)	8.8922	8.8922	8.8922
<b>Interest</b>	<b>201.70</b>	<b>255.86</b>	<b>249.37</b>



## **Return on Equity (“ROE”)**

26. Clause (1) & (2) of Regulation 24 and Clause (2) of Regulation 25(2) 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 and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

xxx”

**“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.”

27. The petitioner has claimed ROE at the rate of 19.705% 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.



28. 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.

29. 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)

Particulars	2016-17 (pro-rata)	2017-18	2018-19
Opening Equity	932.65	1285.63	1430.14
Additional Capitalization	352.98	144.52	0.00
Closing Equity	1285.63	1430.14	1430.14
Average Equity	1109.14	1357.88	1430.14
Return on Equity (Base Rate) (%)	15.500	15.500	15.500
Tax rate for the year (%)	21.342	21.342	21.342
Rate of Return on Equity (Pre Tax) (%)	19.705	19.705	19.705
<b>Return on Equity (Pre Tax)</b>	<b>198.20</b>	<b>267.58</b>	<b>281.82</b>



## **Depreciation**

30. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide as follows:-

### **"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.”

31. 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”





32. The weighted average useful life of the asset has been considered as 31 years in accordance with the above regulation. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)

Particulars	2016-17 (pro-rata)	2017-18	2018-19
Opening Gross block	3108.82	4285.42	4767.15
Additional Capitalization	1176.60	481.73	0.00
Closing Gross block	4285.42	4767.15	4767.15
Average Gross block	3697.12	4526.28	4767.15
Rate of Depreciation (%)	5.17	5.20	5.20
Depreciable Value	3327.41	4073.65	4290.43
Elapsed Life of the assets at beginning of the year	31	30	29
Weighted Balance Useful life of the assets	0	1	2
Remaining Depreciable Value	3327.41	3900.20	3881.67
Depreciation during the year	173.45	235.31	247.85
Cumulative depreciation	173.45	408.76	656.61

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

33. The petitioner has submitted that the wage revision of the employees of the petitioner company is due during 2014-19 and actual impact of wage hike which will be effective from a future date has also not been factored in fixation of the normative O&M rate specified for the 2014-19 tariff period. The petitioner has also submitted that it will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

34. We have considered the submissions of the petitioner and the respondents. We would like to clarify that any application filed by the petitioner for revision of O&M Expenses on account of wage revision will be dealt with in



accordance with the appropriate provisions of the 2014 Tariff Regulations. The O&M Expenses are allowed for the instant transmission assets as per the prevailing norms.

35. Clause 3(a) of Regulation 29 of the 2014 Tariff Regulations specify the norms for O&M Expenses for the transmission system. The total allowable O&M Expenses for the instant assets are as follows:-

Particulars	(in ₹ lakh)		
	2016-17 (pro-rata)	2017-18	2018-19
<b>400 kV Bays :</b>			
No. of Bays	2	2	2
Norms (₹ lakh/Bay)	49.89	56.84	58.73
<b>Double Circuit (Twin/ Triple conductors)</b>			
Length (KM)	17.999	17.999	17.999
Norms (₹ Lakhs/KM))	0.68	0.78	0.81
<b>Total O&amp;M Expenses</b>	129.07	147.06	151.93

### **Interest on Working Capital (“IWC”)**

36. As per 2014 Tariff Regulations the components of the working capital and the interest thereon are discussed hereinafter:-

#### **(i) Receivables**

As per Regulation 28(1) (c) (i) of the 2014 Tariff Regulations, receivables will be equivalent to two months average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months 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 28 (1) (c) (ii) of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M Expenses from 1.4.2014. The petitioner has claimed maintenance spares for the instant asset and value of maintenance spares has accordingly been worked out as 15% of O&M Expenses.

**(iii) O & M Expenses**

Regulation 28 (1) (c) (iii) of the 2014 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 the instant asset and value of O & M Expenses has accordingly been worked out by considering 1 month O&M Expenses.

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

Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later. Further, the 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. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points).

37. The interest on working capital allowed is shown in the table below:-

(₹ in lakh)			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
O & M expenses	11.86	12.25	12.66
Maintenance Spares	21.35	22.06	22.79
Receivables	132.83	155.23	159.55
Total	166.04	189.54	194.99
Rate of Interest (%)	13.50	13.50	13.50
<b>Interest</b>	20.33	25.59	26.32

### **Annual Transmission Charges**

38. The detailed computation of the various components of the annual fixed charges for the transmission asset for the tariff period 2014-19 is summarised below:-

(₹ in lakh)			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
<b>Depreciation</b>			
Opening Gross Block	3108.82	4285.42	4767.15
Additional Capitalisation	1176.60	481.73	0.00
Closing Gross Block	4285.42	4767.15	4767.15
Average Gross Block	3697.12	4526.28	4767.15
Rate of Depreciation (%)	5.17	5.20	5.20
Depreciable Value	3327.41	4073.65	4290.43
Balance useful life of the asset	31	30	29
Elapsed life	0	1	2
Remaining Depreciable Value	3327.41	3900.20	3881.67



Particulars	2016-17 (pro-rata)	2017-18	2018-19
Depreciation during the year	173.45	235.31	247.85
Cumulative depreciation	173.45	408.76	656.61
<b>Interest on Loan</b>			
Gross Normative Loan	2176.17	2999.79	3337.00
Cumulative Repayment upto Previous Year	0.00	173.45	408.76
Net Loan-Opening	2176.17	2826.34	2928.24
Additions	823.62	337.21	0.00
Repayment during the year	173.45	235.31	247.85
Net Loan-Closing	2826.34	2928.24	2680.40
Average Loan	2501.26	2877.29	2804.32
Weighted Average Rate of Interest on Loan (%)	8.8922	8.8922	8.8922
Interest on Loan	201.70	255.86	249.37
<b>Return on Equity</b>			
Opening Equity	932.65	1285.63	1430.14
Additions	352.98	144.52	0.00
Closing Equity	1285.63	1430.14	1430.14
Average Equity	1109.14	1357.88	1430.14
Return on Equity (Base Rate ) (%)	15.500	15.500	15.500
MAT rate for the respective year (%)	21.342	21.342	21.342
Rate of Return on Equity (%)	19.705	19.705	19.705
Return on Equity	198.20	267.58	281.82
<b>Interest on Working Capital</b>			
O & M expenses	11.86	12.25	12.66
Maintenance Spares	21.35	22.06	22.79
Receivables	132.83	155.23	159.55
Total	166.04	189.54	194.99
Rate of Interest	13.50	13.50	13.50
Interest on Working Capital	20.33	25.59	26.32
<b>Annual Transmission Charges</b>			
Depreciation	173.45	235.31	247.85
Interest on Loan	201.70	255.86	249.37
Return on Equity	198.20	267.58	281.82
Interest on Working Capital	20.33	25.59	26.32
O & M Expenses	129.07	147.06	151.93
<b>Total</b>	<b>722.75</b>	<b>931.39</b>	<b>957.28</b>



### **Filing Fee and Publication Expenses**

39. NTPC has submitted its reply that the application fees, expenses incurred on publication of notices in news papers and license fee not be payable by NTPC and be borne by the long term beneficiaries as per terms of Regulation 52 of CERC (Terms and Condition of Tariff Regulations 2014-19). We have considered the submissions of the petitioner. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

### **Licence Fee and RLDC Fees and Charges**

40. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (2) (b) and (2)(a), respectively, of Regulation 52 of the 2014 Tariff Regulations.

### **Service Tax**

41. 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.



### **Sharing of Transmission Charges**

42. NTPC in its reply submitted that for the execution of the ATS of Lara STPP Stage-I (2X800 MW) NTPC and PGCIL have signed an indemnification agreement. The agreement provides that:

*"NTPC has agreed to bear transmission charges as determined by CERC for Lara-I-Raigarh (Kotra) 400kV D/C line and its associated bays from August, 2015 or actual date of commissioning of said line and bays, whichever is later, till commissioning of 1st generating unit. "*

43. NTPC has agreed to bear transmission charges for line to be used for drawl of start-up power. It is observed that NTPC is agreed to pay the transmission charges for drawl of start up power till the commissioning of the generating unit.

44. The transmission charges for the instant assets shall be borne by NTPC till the commissioning of the generating station. Once the generating station is commissioned, 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

45. This order disposes of Petition No. 254/TT/2015.

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

Sd/-  
**(A.S. Bakshi)**  
Member



**ANNEXURE-I**

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

(₹in lakh)

Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
SBI (2014-15)- Loan 3	9.55	801.40	0.00	801.40
Bond L Loan 1	8.40	725.00	0.00	725.00
Bond LI Loan 2	8.40	520.00	0.00	520.00
Proposed Loan 2016-17 9.55% Loan 4	9.55	130.24	0.00	130.24
<b>Total</b>		<b>2176.64</b>	<b>0.00</b>	<b>2176.64</b>

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN  
FOR TARIFF PERIOD 2014-19**

(₹in lakh)

Particulars	2016-17	2017-18	2018-19
Gross Opening Loan	2176.64	2176.64	2176.64
Cumulative Repayment of loan upto previous year	0.00	0.00	0.00
Net Loan Opening	<b>2176.64</b>	<b>2176.64</b>	<b>2176.64</b>
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan Closing	<b>2176.64</b>	<b>2176.64</b>	<b>2176.64</b>
Average Loan	2176.64	2176.64	2176.64
Rate of Interest (%)	8.8922	8.8922	8.8922
<b>Interest</b>	<b>193.55</b>	<b>193.55</b>	<b>193.55</b>

