

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 110/TT/2015

Coram:

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

Date of Hearing : 14.03.2016

Date of Order : 30.03.2016

In the matter of:

Determination of transmission tariff of LILO of 2nd Circuit of 220 kV Jalandhar-Hamirpur T/L under Strengthening Scheme in Northern 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. 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

....Respondents

The following were present:-

For Petitioner: Shri S.S. Raju, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Jasbir Singh, PGCIL
Shri Aryaman Saxena, PGCIL
Shri M.M. Mondal, PGCIL
Shri A.M.Pavgi, PGCIL
Shri P.V.Nath, PGCIL
Shri Amit Yadav, PGCIL
Smt.Archana Kumari, PGCIL
Smt. Sangeeta Edwards,PGCIL

For Respondent: Shri Manoj Kumar Sharma, Advocate, Rajasthan Discom
Shri Pradeep Mishra, Advocate, Rajasthan Discom
Shri Gaurav Gupta, Advocate, PSPCL

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner") for determination of tariff for LILO of 2nd Circuit of 220 kV Jalandhar-Hamirpur Transmission Line under Strengthening Scheme in Northern 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 2.3.2015 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 Northern Region.

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

(a) The investment approval for the project was accorded by Board of Directors of the petitioner company vide memorandum no. C/CP/SS in NR dated 26.10.2012 at an estimated cost of ₹10055 lakh, which included IDC of ₹489 lakh.

(b) The scope of the instant project is as under:-

Transmission Lines:

LILO of Jalandhar-Hamirpur 220 kV D/C line at Hamirpur (POWERGRID).

Sub-stations:

- (i) Extension of Kota 400/220 kV Sub-station (POWERGRID) shifting of 400 kV, 50 MVAR Line Reactor from Merta to Kota Sub-station for its use as bus Reactor and 400 kV Bus Reactor bay.
 - (ii) Extension of Dehar 400/220kV Sub-station (BBMB)-installation of 400 kV, 2x63 MVAR bus Reactor through a single 400 kV hybrid GIS bay and replacement of 250 MVA ICT with 4x105 MVA,1-phase ICT & retrofitting of associated 400/220 kV bay equipment and protection relays.
 - (iii) Extension of Koteswar 400/220 kV Sub-station (THDC)-installation of 400 kV, 125 MVAR bus Reactor alongwith associated bay.
- (c) The date of the commercial operation of the instant transmission asset was 2.3.2015. The petitioner has submitted RLDC certificate in support of the date of commercial operation of the asset.



(d) The petitioner has claimed the transmission charges as under:-

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	5.43	76.09	84.13	84.13	84.13
Interest on Loan	6.87	92.26	94.65	86.42	78.31
Return on Equity	6.05	85.19	94.20	94.20	94.20
Interest on Working Capital	0.44	6.00	6.45	6.26	6.08
O&M Expenses	0.23	2.89	2.99	3.09	3.20
Total	19.02	262.43	282.42	274.10	265.92

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

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	0.24	0.24	0.25	0.26	0.27
O & M Expenses	0.43	0.43	0.45	0.46	0.48
Receivables	39.30	43.74	47.07	45.68	44.32
Total	39.97	44.41	47.77	46.40	45.07
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	0.44	6.00	6.45	6.26	6.08

4. The Annual Fixed Cost for the instant asset was allowed under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges vide order dated 28.5.2015. The petitioner has submitted additional information vide affidavits dated 11.3.2016 and 15.3.2016. The petitioner submitted the revised tariff forms and Auditor's Certificate dated 10.3.2016 and the same has been considered for the purpose of computation of tariff.



5. The petitioner has served the petition on 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 14.3.2016. Ajmer Vidyut Vitran Nigam Limited (AVVNL), Respondent No. 2, Jaipur Vidyut Vitran Nigam Limited (JVVNL), Respondent No. 3, and Jodhpur Vidyut Vitran Nigam Limited (JdVVNL) Respondent No. 4, (hereinafter collectively referred to as “Rajasthan Discoms”) have filed their reply vide a common affidavit dated 23.6.2015. BSES Rajdhani Power Limited (BRPL), Respondent No.12, has filed its reply vide dated 15.5.2015. Respondents have raised issues regarding O&M Expenses and service tax. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

Date of Commercial Operation (COD)

6. The petitioner has claimed the date of the commercial operation of the instant transmission asset as 2.3.2015. 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”

7. The petitioner has submitted RLDC certificate, vide affidavit dated 11.3.2016, issued by NRLDC, POSOCO vide letter dated 24.3.2015 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. Accordingly, the commercial operation date of the transmission asset has been considered as 2.3.2015 and the tariff is worked out from 2.3.2015 to 31.3.2019.

Capital Cost

8. 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.”

9. The petitioner vide affidavit dated 11.3.2016 and 15.3.2016 has submitted the revised tariff forms and Auditor’s Certificate. In the revised tariff forms, the petitioner has claimed capital cost of ₹1276.80 lakh as on COD and additional capitalization of ₹26.13 lakh and ₹290.51 lakh for the years 2014-15 and 2015-16. The petitioner has submitted that the IEDC discharged upto COD is ₹88.09 lakh and out of IDC of ₹81.96 lakh, ₹67.81 lakh has been discharged upto COD and balance ₹14.15 lakh has been discharged during 2015-16. We have considered the capital cost after adjusting the total discharged IDC and IEDC for determination of tariff for the 2014-19 tariff period given as here under:-

(₹ in lakh)

Particulars	Up to COD	2014-15	2015-16
Capital Expenditure	1106.75	26.13	290.51
IEDC Discharged	88.09	0.00	0.00
IDC Discharged	67.81	0.00	14.15
Capital Cost	1262.65	26.13	304.66



10. The admissible capital cost of the transmission asset as on COD is worked out in the subsequent paragraphs considering the time over-run and initial spares.

Time Over-run

11. As per the investment approval dated 14.10.2012, the commissioning schedule of the project is 24 months from the date of investment approval. Accordingly, the schedule date of commercial operation of the instant transmission asset was 13.10.2014. The date of the commercial operation of the instant transmission asset was 2.3.2015 and hence there is time over-run of around 4 months and 19 days.

12. The petitioner has attributed the delay in commissioning of the asset to diversion of forest land. The petitioner has submitted forest land is under the jurisdiction of Hamirpur Forest Division in District Hamirpur, Himachal Pradesh. Approached the authorities of Forest Division on 18.2.2013 after the investment approval was accorded on 26.10.2012. After the inspection by the authorities on 5.3.2013 it was certified that the 12.385 hectare forest land is unavoidable. As it was required to cut the trees in that area, several communications were made by petitioner for forest clearance with various authorities. After the final clearance from forest department, the tender for cutting the trees was floated on 19.12.2014 by the Forest Division, Himachal Pradesh State Forest Development Corporation Ltd., but the awarded party refused to work and the retendering was



done 20.1.2015 and has been finally awarded to party on 31.1.2015. The petitioner has submitted documents in support of the reasons for time over-run.

13. We have considered the submissions of the petitioner and examined the documents submitted to support the justification of time over-run. There is time over-run of 4 months and 19 days in commissioning of the instant assets. It took 23 months for the petitioner to obtain the necessary clearance from the forest department. We are of the view that the time-over of 4 months and 19 days is due to delay in obtaining the forest clearance and it cannot be attributed to the petitioner. The Hon'ble Appellate Tribunal for Electricity in its judgement dated 27.4.2011 in Appeal No.72/2010 has held that the additional cost due to time over-run due to factors beyond the control of project developer shall be capitalised. Accordingly, the time over-run in the instant case is condoned and IDC and IEDC are allowed to be capitalised.

Initial Spares

14. The petitioner, vide Auditor's certificate dated 11.3.2016, has claimed initial spares of ₹19.02 lakh pertaining to transmission line corresponding to capital cost of ₹1423.29 lakh (excluding IDC, IEDC, land cost and cost of civil works) as on the cut-off date of 31.03.2018. We have worked out the admissible initial spares by considering capital cost as per Auditor's Certificate in accordance with the 2014 Tariff Regulations.



15. Regulation 13 of the 2014 Tariff Regulations provide for ceiling norms for capitalization of initial spares in respect of transmission line at 1.00%.

Accordingly, the initial spares have been allowed as under:-

(₹ in lakh)

Particulars	Logical Formula	Transmission Line
Cost as on cut off date	(a)	1423.39
Cost deducting excess IDC	(b)	1423.39
Initial Spares as per Auditor's Certificate	(c)	19.02
Proportionate Initial Spares claimed after deducting IDC	$(d) = (c)/(a) * (b)$	19.02
Ceiling limit as per Regulation 8 of 2009 regulations	(e)(%)	1.00
Initial spares worked out	$(f) = ((b - d) * e) / (100\% - e)$	14.19
Excess initial spares	$(g) = (d) - (f)$	4.83

16. As per the petitioner's submission vide affidavit dated 11.3.2016 the estimated expenditure of ₹19.02 lakh pertaining to initial spares is corresponding to year 2015-16. Accordingly, the capital cost as on COD for tariff computation of 2009-14 tariff period is considered as below:-

(₹ in lakh)

Particulars	As on COD	2014-15	2015-16
Capital cost	1262.65	26.13	304.66
Excess initial spares	0.00	0.00	4.83
Capital cost as on COD considered for tariff determination	1262.65	26.13	299.83



Additional Capital Expenditure

17. 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 recognised 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 13;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law or compliance of any existing law:”

Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff.

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

“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 the 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;”

The cut-off date in the case of instant transmission asset is 31.3.2018.

19. The petitioner has proposed additional capitalization of ₹26.13 lakh and ₹304.66 lakh for the years 2014-15 and 2015-16 respectively towards balance and retention payment under Regulation 14(1)(i) of 2014 Tariff Regulations.. It is



observed that total estimated completion cost of ₹1593.44 lakh (including excess initial spares) is within the approved apportioned cost of ₹2016.19 lakh and within the cut-off date. Accordingly, additional capitalization of ₹26.13 lakh and ₹304.66 lakh is allowed under Regulation 14(1)(i) of 2014 Tariff Regulations.

(₹ in lakh)

Cost as per revised Investment Approval is ₹2016.19 lakh							
Admitted capital cost as on 2.3.2015	Additional capitalisation projected					Total additional capitalisation	Total capital cost as on 31.3.2019
	2014-15	2015-16	2016-17	2017-18	2018-19		
1262.65	26.13	304.66-4.83*	0.00	0.00	0.00	325.96	1588.61

* Excess initial spares disallowed

Debt:Equity Ratio

20. 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.”



21. The petitioner has considered debt:equity ratio as 70:30 as on COD. We have considered debt:equity ratio of 70:30 as on COD and for additional capitalization during 2014-15 and 2015-16. The details of the debt:equity as on the date of COD, i.e. 2.3.2015 and 31.3.2019 considered for the purpose of tariff computation for the 2014-19 tariff period is as follows:-

(₹ in lakh)

Asset	As on COD-2.3.2015		Additional capitalization during 2014-19		As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	883.86	70.00	228.17	70.00	1112.03	70.00
Equity	378.79	30.00	97.79	30.00	476.58	30.00
Total	1262.65	100.00	325.96	100.00	1588.61	100.00

Interest on Loan (“IOL”)

22. 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.”

23. 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. BRPL has submitted that petitioner should clarify under which regulation the change in interest rate due to floating rate of interest is applicable. 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	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross loan opening	883.86	902.15	1112.02	1112.02	1112.02
Cumulative Repayment upto previous year	0.00	5.35	81.31	165.19	249.07
Net Loan-Opening	883.86	896.79	1030.71	946.83	862.95
Additions during the year	18.29	209.88	0.00	0.00	0.00
Repayment during the year	5.35	75.96	83.88	83.88	83.88
Net Loan-Closing	896.79	1030.71	946.83	862.95	779.07
Average Loan	890.32	963.75	988.77	904.89	821.01
Rate of Interest (%)	9.5677	9.5578	9.5427	9.5212	9.5083
Interest	6.77	92.11	94.36	86.16	78.06

Return on Equity ("ROE")

24. 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

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.”

25. The petitioner has claimed ROE at the rate of 20.961% 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.

26. 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.

27. 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	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	378.79	386.63	476.58	476.58	476.58
Additional Capitalization	7.84	89.95	0.00	0.00	0.00
Closing Equity	386.63	476.58	476.58	476.58	476.58
Average Equity	382.71	431.60	476.58	476.58	476.58
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
Tax rate for the year (%)	20.961	21.342	21.342	21.342	21.342
Rate of Return on Equity (Pre Tax) (%)	19.610	19.705	19.705	19.705	19.705
Return on Equity (Pre Tax)	5.96	85.05	93.91	93.91	93.91

Depreciation



28. 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."

29. 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"

30. The petitioner has claimed depreciation considering capital expenditure of ₹1262.65 lakh as on 2.3.2015 with additional capitalization of ₹26.13 lakh and ₹304.66 lakh for the 2014-19 tariff period.



31. We have computed depreciation considering capital expenditure of ₹1262.65 lakh as on 2.3.2015 and additional capitalization of ₹26.13 lakh and ₹299.83 lakh for 2014-15 and 2015-16 respectively. The weighted average useful life of the asset has been considered as 35 years in accordance with the above regulation. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)					
Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	1262.65	1288.78	1588.61	1588.61	1588.61
Additional Capitalisation	26.13	299.83	0.00	0.00	0.00
Closing Gross Block	1288.78	1588.61	1588.61	1588.61	1588.61
Average Gross Block	1275.72	1438.69	1588.61	1588.61	1588.61
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	1148.14	1294.82	1429.75	1429.75	1429.75
Balance useful life of the asset	35.00	34.00	33.00	32.00	31.00
Elapsed life	0.00	1.00	2.00	3.00	4.00
Remaining Depreciable Value	1148.14	1289.47	1348.43	1264.55	1180.67
Depreciation during the year	5.35	75.96	83.88	83.88	83.88
Depreciation upto previous year	0.00	5.35	81.31	165.19	249.07
Cumulative depreciation (incl. of AAD)	5.35	81.31	165.19	249.07	332.95

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

32. Rajasthan Discoms have submitted that the 2014 Tariff Regulations have been framed after detailed discussion and consultation. Thus the sanctity of the regulations should be maintained and any request by the petitioner for revision in O&M norms should not be entertained. Rajasthan Discoms have further submitted that in the matter of the expected wage rise in future as mentioned by



the petitioner should be looked upon in a detailed manner and only after proper scrutiny any additional changes should be allowed and the same should be in accordance with the law

33. Regulation 29(4)(a) of the 2014 Tariff Regulations specifies the following norms for O&M Expenses for 9.238 km 220kV Double Circuit AC transmission Line.

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Norm (₹ lakh/km)					
Double Circuit Single Conductor	0.303	0.313	0.324	0.334	0.346

34. The petitioner has claimed O&M Expenses as specified in sub-clause (a) of clause (4) of Regulation 29 of the 2014 Tariff Regulations. The details of O&M Expenses allowed are given hereunder:-

(₹ in lakh)

O&M Expenses				
2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
0.22	2.89	2.99	3.09	3.20

35. 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. BRPL has submitted that the cost of wage revision should be taken care by the petitioner by improving their productivity levels and the beneficiaries should not be burdened over and above what has been provided for in the tariff regulations.

36. 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 (“IWC”)

37. 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).



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

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	21.67	22.38	23.12	23.89	24.68
O & M expenses	39.00	40.30	41.64	43.02	44.44
Receivables	327.09	379.53	404.59	396.21	387.87
Total	387.75	442.21	469.35	463.12	457.00
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	13.77	59.70	63.36	62.52	61.69

Annual Transmission Charges

39. 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	2014-15 (pro-rata)	2015-16	2016-17	2017 -18	2018-19
Depreciation					
Opening Gross Block	1262.65	1288.78	1588.61	1588.61	1588.61
Additional Capitalisation	26.13	299.83	0.00	0.00	0.00
Closing Gross Block	1288.78	1588.61	1588.61	1588.61	1588.61
Average Gross Block	1275.72	1438.69	1588.61	1588.61	1588.61
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	1148.14	1294.82	1429.75	1429.75	1429.75
Balance useful life of the asset	35.00	34.00	33.00	32.00	31.00
Elapsed life	0.00	1.00	2.00	3.00	4.00
Remaining Depreciable Value	1148.14	1289.47	1348.43	1264.55	1180.67
Depreciation during the year	5.35	75.96	83.88	83.88	83.88
Depreciation upto previous year	0.00	5.35	81.31	165.19	249.07
Cumulative depreciation (incl. of AAD)	5.35	81.31	165.19	249.07	332.95



Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017 -18	2018-19
Interest on Loan					
Gross Normative Loan	883.86	902.15	1112.02	1112.02	1112.02
Cumulative Repayment upto Previous Year	0.00	5.35	81.31	165.19	249.07
Net Loan-Opening	883.86	896.79	1030.71	946.83	862.95
Additions	18.29	209.88	0.00	0.00	0.00
Repayment during the year	5.35	75.96	83.88	83.88	83.88
Net Loan-Closing	896.79	1030.71	946.83	862.95	779.07
Average Loan	890.32	963.75	988.77	904.89	821.01
Weighted Average Rate of Interest on Loan (%)	9.5677	9.5578	9.5427	9.5212	9.5083
Interest on Loan	6.77	92.11	94.36	86.16	78.06
Return on Equity					
Opening Equity	378.79	386.63	476.58	476.58	476.58
Additions	7.84	89.95	0.00	0.00	0.00
Closing Equity	386.63	476.58	476.58	476.58	476.58
Average Equity	382.71	431.60	476.58	476.58	476.58
Return on Equity (Base Rate)(%)	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year (%)	20.961	21.342	21.342	21.342	21.342
Rate of Return on Equity (%)	19.610	19.705	19.705	19.705	19.705
Return on Equity	5.96	85.05	93.91	93.91	93.91
Interest on Working Capital					
O & M expenses	0.23	0.24	0.25	0.26	0.27
Maintenance Spares	0.42	0.43	0.45	0.46	0.48
Receivables	39.30	43.67	46.93	45.55	44.19
Total	39.95	44.34	47.63	46.27	44.93
Rate of Interest(%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	0.43	5.99	6.43	6.25	6.07
Annual Transmission Charges					
Depreciation	5.35	75.96	83.88	83.88	83.88
Interest on Loan	6.77	92.11	94.36	86.16	78.06
Return on Equity	5.96	85.05	93.91	93.91	93.91
Interest on Working Capital	0.43	5.99	6.43	6.25	6.07



Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017 -18	2018-19
O & M Expenses	0.22	2.89	2.99	3.09	3.20
Total	18.73	262.00	281.57	273.28	265.12

Filing Fee and Publication Expenses

40. 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. BRPL has submitted that the petitioner's prayer for reimbursement of filing fee and publication expenses should be rejected. 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

41. 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

42. The petitioner has sought to recover Service Tax on Transmission Charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list in future. Rajasthan Discoms have



submitted that the petitioner's prayer is on presumption basis, and the same should not be allowed. We are of the view that the petitioner's prayer regarding service tax is premature.

Sharing of Transmission Charges

43. 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.

44. This order disposes of Petition No. 110/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**

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
SBI(21.03.2012)-DOCO-	10.25	200.00	0.00	200.00
SBI (21.03.2012)-DOCO	10.25	130.00	0.00	130.00
BOND-XLIII-DOCO-	7.93	45.00	0.00	45.00
BOND-XLV-DOCO-	9.65	87.87	0.00	87.87
SBI(2014-15)-DOCO-	10.25	48.00	0.00	48.00
BOND XLVI-DOCO-	9.30	141.18	0.00	141.18
BOND XLVII-ADDCAP FOR 2014-15 DOCO-	8.93	0.00	18.29	18.29
BOND XLVII-ADDCAP FOR 2015-16 Add Cap-	8.93	0.00	9.91	9.91
BOND XLVII-DOCO-	8.93	231.80	0.00	231.80
Total		883.85	28.20	912.05

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	883.85	902.14	912.05	912.05	912.05
Cumulative Repayment of loan upto previous year	0.00	0.00	0.00	30.00	71.07
Net Loan Opening	883.85	902.14	912.05	882.05	840.98
Additions during the year	18.29	9.91	0.00	0.00	0.00
Repayment during the year	0.00	0.00	30.00	41.07	62.74
Net Loan Closing	902.14	912.05	882.05	840.98	778.24
Average Loan	893.00	907.10	897.05	861.52	809.61
Rate of Interest(%)	9.5677	9.5578	9.5427	9.5212	9.5083
Interest	85.44	86.70	85.60	82.03	76.98

