

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 106/TT/2016

Coram:

Shri A.S. Bakshi, Member

Dr.M.K. Iyer, Member

Date of Hearing : 05.10.2016

Date of Order : 26.10.2016

In the matter of:

Determination of transmission tariff for 2014-19 tariff period for Asset-I :- 1 no of 400 kV bay along with 50 MVAR Line Reactor for Circuit-1 of 400 kV RAPP-Shujalpur Transmission Line; Asset-2 :- 1 no. of 400 kV bay along with 50 MVAR Line Reactor Circuit-2 of 400 kV RAPP-Shujalpur Transmission Line under provision of 400 kV bays at Shujalpur for Part ATS of RAPP 7&8 in Western Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations,1999 and Regulation 6 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

And in the matter of:

Power Grid Corporation of India Ltd.
'SAUDAMINI', Plot No-2,
Sector-29, Gurgaon -122 001 (Haryana).

.....**Petitioner**

Versus

1. Madhya Pradesh Power Management Company Ltd.
Shakti Bhawan, Rampur
Jabalpur - 482008
2. Maharashtra State Electricity Distribution Co. Ltd.
Prakashgad, 4th Floor
Andheri (East), Mumbai - 400 052
3. Gujarat Urja Vikas Nigam Ltd.
Sardar Patel Vidyut Bhawan,
Race Course Road
Vadodara - 390 007



4. Electricity Department Govt. Of Goa
Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa - 403 001
5. Electricity Department
Administration of Daman & Diu
Daman - 396 210
6. Electricity Department
Administration Of Dadra Nagar Haveli
U.T., Silvassa - 396 230
7. Chhattisgarh State Electricity Board
P.O.Sunder Nagar, Dangania, Raipur
Chhatisgarh-492013
8. Madhya Pradesh Audyogik Kendra
Vikas Nigam (Indore) Ltd.
3/54, Press Complex, Agra-Bombay Road,
Indore-452 008
9. Sterlite Technologies Limited
C2, Mira Corporate Suits, 2nd Floor,
Okhla Crossing, Mathura ROad, Ishwar Nagar,
New Delhi-110066

....Respondents

The following were present:-

For Petitioner: Shri S. S. Raju, PGCIL
Shri M. M. Mondal, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Jasbir Singh, PGCIL
Shri S.K. Venkatsan, PGCIL
Shri Piyush Awasthi, PGCIL

For Respondent: None

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd.
("the petitioner") for determination of tariff for 1 no of 400 kV bay along with 50



MVAR Line Reactor for Circuit-I of 400 kV RAPP-Shujalpur Transmission Line (hereinafter referred to as “Asset-I”) and 1 no. of 400 kV bay along with 50MVAR Line Reactor Circuit-2 of 400 kV RAPP-Shujalpur Transmission Line (hereinafter referred to as “Asset-II”) under "Provision of 400 kV bays at Shujalpur for Part ATS of RAPP 7&8 in Western Region" (hereinafter referred to as “Transmission Project”) 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 approval for the project was accorded by Board of Directors of the petitioner company, vide Memorandum No. C/CP/Shujalpur Bays dated 7.4.2015 at an estimated cost of ₹2371.00 lakh including IDC of ₹69.00 lakh (based on December, 2014 price level). As per the investment approval, the transmission assets were scheduled to be commissioned within 11 months from the date of investment approval, i.e. by 7.4.2015.

(b) The scheme was approved in the 29th meeting of the Standing Committee on Power System Planning of Northern Region held on 29.12.2010, which constitutes the associated transmission system for RAPP 7&8 (2x700 MW) Nuclear power plant in Rajasthan (with a commissioning schedule of June, 2016 and December, 2016). This transmission system agreed in the



NR was also taken up for discussions in the 32nd meeting of the Standing Committee on Power System Planning of WR dated 13.5.2011 and this transmission system was endorsed by Western Region. The entire scope of the transmission project is covered in the instant petition.

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

(₹ in lakh)

Asset I				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Depreciation	3.19	45.32	69.80	74.33
Interest on Loan	3.96	54.14	79.44	78.29
Return on Equity	3.53	50.06	77.29	82.36
Interest on Working Capital	0.79	7.00	8.89	9.21
O&M Expenses	9.85	64.37	66.51	68.71
Total	21.32	220.89	301.93	312.90

(₹ in lakh)

Asset II				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Depreciation	1.79	44.19	67.63	72.25
Interest on Loan	2.23	52.64	76.65	75.82
Return on Equity	1.98	48.80	74.86	80.03
Interest on Working Capital	0.44	6.91	8.72	9.05
O&M Expenses	5.55	64.37	66.51	68.71
Total	11.99	216.91	294.37	305.86

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

(₹ in lakh)

Asset-I				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
O & M Expenses	5.19	5.36	5.54	5.73
Maintenance Spares	9.35	9.66	9.98	10.31
Receivables	22.48	36.82	50.32	52.15
Total	37.02	51.84	65.84	68.19
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest	0.79	7.00	8.89	9.21



(₹in lakh)

Asset-II				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
O & M Expenses	5.19	5.36	5.54	5.73
Maintenance Spares	9.35	9.66	9.98	10.31
Receivables	22.44	36.15	49.06	50.98
Total	36.98	51.17	64.58	67.02
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest	0.44	6.91	8.72	9.05

4. 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. Respondent No. 1, Madhya Pradesh Power Management Company Ltd (hereinafter referred to as “MPPMCL”) has filed reply vide affidavit dated 25.7.2016. The petitioner has filed its rejoinder to the reply vide affidavit dated 12.8.2016. The issues raised by MPPMCL and the clarifications given by the petitioner are dealt in relevant paragraphs of the order. The hearing in this matter was held on 5.10.2016.

Commercial Operation Date (“COD”)

5. Clause (3) of Regulation 4 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”

6. The petitioner has submitted that Asset I and Asset II were commissioned on 4.2.2016 and 28.2.2016 respectively. Hence tariff is worked out for the instant assets from the COD to 31.3.2019. The petitioner has submitted RLDC trial run operation certificate dated 9.3.2016.

Capital Cost

7. The petitioner has claimed the capital cost ₹282.74 lakh each for Asset I and Asset II as on actual COD. The details of approved apportioned cost, capital cost on COD, additional capital expenditure and estimated completion cost claimed by the petitioner are given below:-

(₹ in lakh)

Asset	Apportioned approved cost as per FR	Capital cost as on 1.4.2014	Addition capital expenditure			Total capital cost as on 31.3.2019
			2015-16	2016-17	2017-18	
Asset-I	1185.27	282.74	189.27	749.69	171.45	1393.15
Asset-II	1185.27	282.74	189.27	706.89	174.88	1353.78

8. 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.”

9. MPPMCL has submitted that the petitioner has claimed capital cost of ₹282.74 lakh as on COD for each asset and the petitioner has not submitted detailed audited report of expenditure during 2015-16 as per Regulation 9(2)(a) of 2014 Tariff Regulation and hence it may not be allowed. Further MPPMCL has submitted that the petitioner has claimed additional capitalization of an amount of ₹282.63 lakh and ₹ 281.76 lakh for Asset I and II respectively and the petitioner's claim of additional capital expenditure is excessive and it may not be allowed.

10. In response, the petitioner has submitted that MPPMCL has mentioned that the petitioner has claimed additional capitalization of ₹282.63 lakh for Asset-I and ₹281.76 lakh for Asset-II during control period 2014-19. It is clarified that ₹282.63 lakh and ₹281.76 lakh is the expenditure up to COD for Asset-I and



Asset-II respectively, not the additional capitalization for control period for 2014-19 as stated in the reply of MPPMCL. Regarding the low expenditure up to COD it is submitted that as per the Investment Approval, the schedule completion was within 11 months from the date of Investment Approval. The date of Investment Approval was 7.4.2015. Hence, the commissioning schedule comes to 7.3.2016. Considering this, the package for the construction of bays along with reactors awarded on 20.5.2015, within 45 days of investment approval with the completion schedule of February 2016. However, RAPPTCL (developer of 400 kV D/C RAPP-Shujalpur Transmission Line) vide their letter dated 20.7.2015 intimated that the line shall be ready for commissioning by November, 2015. However, in one of the review meetings, it was observed that supply of reactors, could not be expected in such a short period as it involves various steps of engineering, design, manufacturing, testing, transportation and commissioning time at site. There was urgency in making terminal bays ready along with Reactors matching with transmission line. The petitioner explored other options and it was decided that 2 nos of 50 MVAR spare reactors be shifted to Shujalpur on replenishment basis. In a meeting held at CEA, Delhi on 15.12.2015, representative of RAPPTCL informed that 400 kV D/C RAPP-Shujalpur line is completed and waiting for the commissioning of bays at Shujalpur for the termination of line. Chief Engineer (PSPM), CEA advised POWERGRID to complete the bays at the earliest. The expenditure up to COD is on lower side as the diverted spare reactors were used for making the bays ready in line with the associated transmission line in the overall interest of Power System. The cost of reactors have not been included in the expenditure upto COD as per Auditor Certificate. It is included in projected expenditure after COD. The expenditure



upto COD of both the assets consists only of the expenditure on civil works, switchgear, control panel, bus bars, PLCC structure and auxiliary system.

11. We have considered the submission of the petitioner and the respondent. It is observed that the petitioner has submitted Auditor Certificate in support of its claim of capital cost as on COD and capital expenditure from COD to 31.3.2019, accordingly it is allowed.

Time over-run

12. As per the investment approval, the commissioning schedule of the project was 11 months from the date of investment approval. The investment approval was accorded on 9.3.2015 and hence the schedule date of commercial operation of the instant assets was 6.3.2016. The petitioner has submitted that Asset I and Asset II were commissioned on 4.2.2016 and 28.2.2016 respectively. Hence, there is no time over-run in commissioning of the instant assets.

IDC and IEDC

13. The petitioner has submitted the details of IEDC and IDC based on actual COD and undischarged liabilities. We have considered IDC and IEDC given in Auditor's Certificate dated 4.5.2016 and the details are as follows:-

	(₹ in lakh)	
Asset	IEDC up to COD	IDC up to COD
Asset I	6.10	4.96
Asset II	6.10	4.96

14. The petitioner has submitted that IEDC claimed is based on the actual COD. The IDC discharged on cash basis are as below:-



(₹ in lakh)

Asset	IDC discharged up to COD	IDC discharged during 2015-16
Asset I	4.85	0.11
Asset II	3.98	0.98

15. Based on the above submissions of the petitioner, IDC is being capitalised up to COD and IDC discharged during 2015-16 has been added to the additional capital expenditure during 2015-16. Capital cost after adjustment of IDC is as follows:-

(₹ in lakh)

Asset	Capital Cost as on COD after adjustment of IDC	Additional Capital Expenditure after adjustment of IDC		
		2015-16	2016-17	2017-18
Asset I	282.63	189.38	749.69	171.45
Asset II	281.76	190.25	706.89	174.88

Cost over-run

16. The petitioner, vide Auditor's certificate dated 4.5.2016 has submitted that total estimated completion cost as on 31.3.2019 is ₹1393.15 lakh and ₹1353.78 lakh with regard to Asset I and Asset II respectively against apportioned approved cost of ₹1185.27 lakh for each asset. There is cost over-run in case of instant assets. The petitioner has submitted that the increase in cost of the assets is due to higher cost discovered through bidding. The petitioner has submitted that the cost has been increased as for procurement, open competitive bidding rote was followed and by providing equal opportunity to all eligible firms, lowest possible market prices for required product/ services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the estimated cost depending upon prevailing market conditions. Further, as regards



to cost variation of individual item in sub-station packages the petitioner has submitted that contracts of sub-station packages are awarded in totality which includes number of items. Multiple number of bids is received from different vendors through open competitive bidding. Award is made to the lowest evaluated bidder for the sub-station package as a whole. The item wise comparison of different items under one package with respective cost estimates does not give appropriate results since the actual prices of various items under sub-station package solely depend on how the bifurcation of the total price has been made by the vendor while quoting the prices for different items under complete package. The rates of individual items of vendors are asked, only for the purpose of on account payment and not for any comparison. Hence there is variation in actual bid-prices and the FR-cost estimates. The petitioner has submitted that the variation is beyond the control of the petitioner.

17. We have considered the submissions of the petitioner. The justification given by the petitioner for cost variation is a standard justification given whenever there is any variation in cost. The cost estimates prepared by the petitioner do not appear to be based on realistic and actual historical data. The petitioner should adopt better techniques and procedure to arrive at cost estimates. We are not inclined to allow the cost over-run and accordingly it is restricted to the approved apportioned cost. However the same will be reconsidered at the time of truing-up, subject to the petitioner's submitting valid reasons for the cost over-run. The capital cost considered for the purpose of computation of tariff is as follows:-



(₹in lakh)

Asset	Capital Cost as on COD after adjustment of IDC	Additional Capital Expenditure after adjustment of IDC		
		2015-16	2016-17	2017-18
Asset I	282.63	189.38	713.26	0.00
Asset II	281.76	190.25	706.89	6.37

Initial Spares

18. The petitioner has claimed initial spares of ₹63.18 lakh for each Asset I and Asset II as on the cut-off date of 31.3.2019. The petitioner has also submitted Auditor's certificate dated 4.5.2016 in support of its claim.

19. Regulation 13 of the 2014 Tariff Regulations provide for ceiling norms for capitalization of initial spares. Regulation 13 of the 2014 Tariff Regulations specify as follows:-

"13. Initial Spares: Initial spares shall be capitalised as a percentage of the Plant and Machinery cost upto cut-off date, subject to following ceiling norms:

.
.

.

(d) Transmission system

(i) Transmission line - 1.00%

(ii) Transmission Sub-station (Green Field) - 4.00%

(iii) Transmission Sub-station (Brown Field) - 6.00%

(iv) Series Compensation devices and HVDC Station - 4.00%

(v) Gas Insulated Sub-station (GIS) - 5.00%

(vi) Communication system - 3.5%"

20. The ceiling limit of sub-station is 6.00% of the Plant and Machinery Cost of the element for brown-field projects. Accordingly, the initial spares are allowed with regard to Asset I and Asset II as specified in the 2014 Tariff Regulations and it is as under:-

(₹in lakh)

Particulars	Asset I	Asset II
Plant and Machinery cost claimed as on cut-off date after deducting IDC,IEDC and civil works	1382.09	1342.72
Proportionate Plant and Machinery cost claimed as on cut-off date after deducting IDC,IEDC and civil works	1175.86	1175.59



Initial spares as per Auditor`s Certificate	63.18	63.18
Proportionate Initial spares as per Auditor`s Certificate	53.75	55.32
Ceiling limit as per Regulation 13 of 2014 regulations	6.00%	6.00%
Initial spares worked out as per norms	71.62	71.51
Excess initial spares claimed	0.00	0.00

21. The initial spares claimed by the petitioner are within the limits as prescribed under Regulation 13 of the 2014 Tariff Regulation. The initial spares allowed for the instant assets are as follows:-

(₹in lakh)			
Assets	Capital cost on COD after adjusting IDC	Excess initial spares disallowed	Capital cost allowed as on COD for tariff determination purpose
Asset I	282.63	0.00	282.63
Asset II	281.76	0.00	281.76

Additional Capital Expenditure

22. The petitioner has proposed additional capitalization of ₹1110.41 lakh and ₹1071.04 lakh with regard to Asset I and II towards balance and retention payment under Regulation 14(1) (i) of 2014 Tariff Regulations.

23. Clause (1)(i) of Regulation 14 of the 2014 Tariff Regulations defines 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 13;

(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:

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."

24. 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;"

25. MPPMCL has submitted that the petitioner's claim of additional capital expenditure with regard to sub-station and PLCC should be disallowed as the petitioner has not given any specific justification under which sub-clause of Regulation 14 of 2014 Tariff Regulation petitioner's claim is made. Further, MPPMCL has submitted the petitioner's claim for 2015-16 cannot be in the absence of audited report.

26. In response, the petitioner has submitted that additional capital expenditure for 2015-16, 2016-17 and 2017-18 has been claimed under Regulation 14(1)(i) of 2014 Tariff Regulation.

27. We have considered the submission of the respondent and the petitioner. The cut-off date of the instant transmission asset is 31.3.2019. The petitioner claim of additional capital expenditure for 2015-16, 2016-17 and 2017-18 is towards undischarged liabilities and hence it is allowed under Regulation 14(1)(i) of 2014 Tariff Regulation, subject to true up on actual basis and it is as follows:-



(in ₹ lakh)

Asset	Approved Apportioned cost	Exp. up to COD	Additional Capital Expenditure				Estimated completion Cost
			2015-16	2016-17	2017-18	Total	
Asset I	1185.27	282.63	189.38	713.26	0.00	902.64	1185.27
Asset II	1185.27	281.76	190.25	706.89	6.37	903.51	1176.63

Debt: Equity Ratio

28. 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:

- where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff;
- the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment;
- 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.”

29. 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, 2016-17 and 2017-18. Accordingly, we have considered the same for the purpose of tariff computation for the 2014-19 tariff period. The details of debt:equity as on COD, as on 31.3.2019 and for additional capital expenditure is as follows:-

(₹ in lakh)

Asset I						
Particulars	As on COD		Additional capitalization during 2014-19		As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	197.84	70.00	631.85	70.00	829.69	70.00
Equity	84.79	30.00	270.79	30.00	355.58	30.00
Total	282.63	100.00	902.64	100.00	1185.27	100.00



(₹ in lakh)

Asset II						
Particulars	As on COD		Additional capitalization during 2014-19		As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	197.23	70.00	632.46	70.00	829.69	70.00
Equity	84.53	30.00	271.05	30.00	355.58	30.00
Total	281.76	100.00	903.51	100.00	1185.27	100.00

Interest on Loan (“IOL”)

30. 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.”

31. 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 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)

Asset I				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross loan opening	197.84	330.41	829.69	829.69
Cumulative Repayment upto previous year	0.00	3.15	47.50	110.83
Net Loan-Opening	197.84	327.26	782.19	718.86
Additions during the year	132.57	499.28	0.00	0.00
Repayment during the year	3.15	44.35	63.33	63.33
Net Loan-Closing	327.26	782.19	718.86	655.53
Average Loan	262.55	554.72	750.52	687.19
Rate of Interest (%)	9.5500	9.5500	9.5500	9.5500
Interest on Loan	3.92	52.98	71.68	65.63

(₹ in lakh)

Asset II				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross loan opening	197.23	330.41	825.23	829.69
Cumulative Repayment upto previous year	0.00	1.82	46.01	109.19
Net Loan-Opening	197.23	328.59	779.22	720.50
Additions during the year	133.18	494.82	4.46	0.00
Repayment during the year	1.82	44.19	63.18	63.35
Net Loan-Closing	328.59	779.22	720.50	657.15
Average Loan	262.91	553.90	749.86	688.83
Rate of Interest (%)	9.5201	9.5023	9.5023	9.5023
Interest on Loan	2.26	52.63	71.25	65.45

Return on Equity (“ROE”)

32. 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.”

33. The petitioner has claimed ROE at the rate of 19.705% after grossing up the ROE of 15.50% 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.

34. 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.

35. 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 claimed that MAT rate of 21.34% is applicable to the petitioner's company during 2015-16. Accordingly, the MAT rate applicable during 2015-16 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)

Asset I				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Equity	84.79	141.60	355.58	355.58
Additional Capitalization	56.81	213.98	0.00	0.00
Closing Equity	141.60	355.58	355.58	355.58
Average Equity	113.20	248.59	355.58	355.58
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500
Tax rate for the year (%)	21.342	21.342	21.342	21.342
Rate of Return on Equity (Pre Tax) (%)	19.705	19.705	19.705	19.705
Return on Equity	3.48	48.99	70.07	70.07

(₹ in lakh)

Asset II				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Equity	84.53	141.60	353.67	355.58
Additional Capitalization	57.08	212.07	1.91	0.00
Closing Equity	141.60	353.67	355.58	355.58
Average Equity	113.07	247.64	354.63	355.58
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500
Tax rate for the year (%)	21.342	21.342	21.342	21.342
Rate of Return on Equity (Pre Tax) (%)	19.705	19.705	19.705	19.705
Return on Equity	2.01	48.80	69.88	70.07

Depreciation

36. 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.”

37. 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”

38. The weighted average useful life of the instant asset has been considered as 25 years in accordance with the above regulation. The details of the depreciation allowed are given hereunder:-



(₹ in lakh)

Asset I				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Gross block	282.63	472.01	1185.27	1185.27
Additional Capitalization	189.38	713.26	0.00	0.00
Closing Gross block	472.01	1185.27	1185.27	1185.27
Average Gross block	377.32	828.64	1185.27	1185.27
Rate of Depreciation (%)	5.34	5.35	5.34	5.34
Depreciable Value	339.59	745.78	1066.74	1066.74
Balance useful life of the assets	25.00	24.00	23.00	22.00
Elapsed life	0.00	1.00	2.00	3.00
Remaining Depreciable Value	339.59	698.28	955.91	892.58
Depreciation during the year	3.15	44.35	63.33	63.33
Cumulative depreciation	3.15	47.50	110.83	174.16

(₹ in lakh)

Asset II				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Gross block	281.76	472.01	1178.90	1185.27
Additional Capitalization	190.25	706.89	6.37	0.00
Closing Gross block	472.01	1178.90	1185.27	1185.27
Average Gross block	376.89	825.46	1182.09	1185.27
Rate of Depreciation (%)	5.34	5.35	5.34	5.34
Depreciable Value	339.20	742.91	1063.88	1066.74
Balance useful life of the assets	25.00	24.00	23.00	22.00
Elapsed life	0.00	1.00	2.00	3.00
Remaining Depreciable Value	339.20	696.90	954.69	894.21
Depreciation during the year	1.82	44.19	63.18	63.35
Cumulative depreciation	1.82	46.01	109.19	172.54

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

39. 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.



40. MPPMCL has submitted that the petitioner company is huge profit making company and should bear the burden of wage revision of its employees.

41. In response, the petitioner has submitted that the scheme of wage revision applicable to CPSUs is binding on the petitioner, the petitioner and the petitioner would approach the Commission for suitable revision.

42. We have considered the submissions of the petitioner and the respondent. 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.

43. 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:-

(₹ in lakh)				
Particulars	2015-16	2016-17	2017-18	2018-19
400 kV Bay				
Norms Line (Rs Lakh per Bay)	62.30	64.37	66.51	68.71

(₹ in lakh)				
Asset I				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
400 kV Bay				
No. of Bay	1	1	1	1
Total O&M Expenses	9.73	64.37	66.51	68.71

(₹ in lakh)				
Asset II				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
400 kV Bay				
No. of Bay	1	1	1	1



Asset II				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Total O&M Expenses	5.63	64.37	66.51	68.71

Interest on Working Capital (“IWC”)

44. 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).

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

(₹ in lakh)

Asset I				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
O & M expenses	5.19	5.36	5.54	5.73
Maintenance Spares	9.35	9.66	9.98	10.31
Receivables	22.47	36.27	46.66	46.02
Total	37.01	51.29	62.18	62.05
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest on Working Capital	0.78	6.92	8.39	8.38

(₹ in lakh)

Asset II				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
O & M expenses	5.19	5.36	5.54	5.73
Maintenance Spares	9.35	9.66	9.98	10.31
Receivables	22.46	36.15	46.53	45.99
Total	36.99	51.17	62.05	62.02



Asset II				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest on Working Capital	0.45	6.91	8.38	8.37

Annual Transmission Charges

46. 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)

Asset I				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation				
Opening Gross Block	282.63	472.01	1185.27	1185.27
Additional Capitalisation	189.38	713.26	0.00	0.00
Closing Gross Block	472.01	1185.27	1185.27	1185.27
Average Gross Block	377.32	828.64	1185.27	1185.27
Rate of Depreciation (%)	5.34	5.35	5.34	5.34
Depreciable Value	339.59	745.78	1066.74	1066.74
Balance useful life of the asset	25.00	24.00	23.00	22.00
Elapsed life	0.00	1.00	2.00	3.00
Remaining Depreciable Value	339.59	698.28	955.91	892.58
Depreciation during the year	3.15	44.35	63.33	63.33
Cumulative depreciation	3.15	47.50	110.83	174.16
Interest on Loan				
Gross Normative Loan	197.84	330.41	829.69	829.69
Cumulative Repayments upto Previous Year	0.00	3.15	47.50	110.83
Net Loan-Opening	197.84	327.26	782.19	718.86
Additions	132.57	499.28	0.00	0.00
Repayment during the year	3.15	44.35	63.33	63.33
Net Loan-Closing	327.26	782.19	718.86	655.53
Average Loan	262.55	554.72	750.52	687.19
Weighted Average Rate of Interest on Loan (%)	9.5500	9.5500	9.5500	9.5500
Interest on Loan	3.92	52.98	71.68	65.63
Return on Equity				
Opening Equity	84.79	141.60	355.58	355.58
Additions	56.81	213.98	0.00	0.00

Asset I				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Closing Equity	141.60	355.58	355.58	355.58
Average Equity	113.20	248.59	355.58	355.58
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
Rate of Return on Equity (%)	19.705	19.705	19.705	19.705
Return on Equity	3.48	48.99	70.07	70.07
Interest on Working Capital				
O & M Expenses	5.19	5.36	5.54	5.73
Maintenance Spares	9.35	9.66	9.98	10.31
Receivables	22.47	36.27	46.66	46.02
Total Working Capital	37.01	51.29	62.18	62.05
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest of working capital	0.78	6.92	8.39	8.38
Annual Transmission Charges				
Depreciation	3.15	44.35	63.33	63.33
Interest on Loan	3.92	52.98	71.68	65.63
Return on Equity	3.48	48.99	70.07	70.07
Interest on Working Capital	0.78	6.92	8.39	8.38
O & M Expenses	9.73	64.37	66.51	68.71
Total	21.06	217.61	279.98	276.11

(□ in lakh)

Asset II				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation				
Opening Gross Block	281.76	472.01	1178.90	1185.27
Additional Capitalisation	190.25	706.89	6.37	0.00
Closing Gross Block	472.01	1178.90	1185.27	1185.27
Average Gross Block	376.89	825.46	1182.09	1185.27
Rate of Depreciation (%)	5.34	5.35	5.34	5.34
Depreciable Value	339.20	742.91	1063.88	1066.74
Balance useful life of the asset	25.00	24.00	23.00	22.00
Elapsed life	0.00	1.00	2.00	3.00
Remaining Depreciable Value	339.20	696.90	954.69	894.21
Depreciation during the year	1.82	44.19	63.18	63.35
Cumulative depreciation	1.82	46.01	109.19	172.54
Interest on Loan				
Gross Normative Loan	197.23	330.41	825.23	829.69
Cumulative Repayments upto Previous Year	0.00	1.82	46.01	109.19
Net Loan-Opening	197.23	328.59	779.22	720.50



Asset II				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Additions	133.18	494.82	4.46	0.00
Repayment during the year	1.82	44.19	63.18	63.35
Net Loan-Closing	328.59	779.22	720.50	657.15
Average Loan	262.91	553.90	749.86	688.83
Weighted Average Rate of Interest on Loan (%)	9.5201	9.5023	9.5023	9.5023
Interest on Loan	2.26	52.63	71.25	65.45
Return on Equity				
Opening Equity	84.53	141.60	353.67	355.58
Additions	57.08	212.07	1.91	0.00
Closing Equity	141.60	353.67	355.58	355.58
Average Equity	113.07	247.64	354.63	355.58
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
Rate of Return on Equity (%)	19.705	19.705	19.705	19.705
Return on Equity	2.01	48.80	69.88	70.07
Interest on Working Capital				
O & M Expenses	5.19	5.36	5.54	5.73
Maintenance Spares	9.35	9.66	9.98	10.31
Receivables	22.46	36.15	46.53	45.99
Total Working Capital	36.99	51.17	62.05	62.02
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest of working capital	0.45	6.91	8.38	8.37
Annual Transmission Charges				
Depreciation	1.82	44.19	63.18	63.35
Interest on Loan	2.26	52.63	71.25	65.45
Return on Equity	2.01	48.80	69.88	70.07
Interest on Working Capital	0.45	6.91	8.38	8.37
O & M Expenses	5.63	64.37	66.51	68.71
Total	12.18	216.90	279.20	275.95

Filing Fee and Publication Expenses

47. 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

48. 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

49. 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. MPPMCL has submitted that corporate income tax, implementation of GST, Service tax on transmission charges including cess etc. shall be allowed only as per applicable laws. In response the petitioner has submitted that any tax/ charges imposed by Central/ State Government and/ or any other local bodies/ authorities / regulatory authorities in relation to transmission of electricity shall be borne by beneficiary. We have considered the submission of the petitioner and the respondent. We are of the view that the petitioner's prayer of service tax is premature.

GST

50. The petitioner has prayed for reimbursement of tax, if any, on account of proposed implementation of GST. We are of the view that petitioner's prayer is premature.



Sharing of Transmission Charges

51. 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.

52. This order disposes of Petition No. 106/TT/2016

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)

Asset I					
Particulars	Interest Rate (%)	Loan deployed as on 1.4.2015	Additions during the tariff period	Repayment	Total
SBI (2014-15)-ADDCAP FOR 2015-2016 Loan 2-	9.55	0.00	132.49	0.00	132.49
SBI (2014-15)-ADDCAP FOR 2015-2016 Loan 3 (Accrual IDC)-	9.55	0.00	0.07	0.00	0.07
SBI (2014-15)-Loan 1-	9.55	197.84	0.00	0.00	197.84
Total		197.84	132.56	0.00	330.40

(in ₹ lakh)

Asset II					
Particulars	Interest Rate (%)	Loan deployed as on 1.4.2015	Additions during the tariff period	Repayment	Total
SBI (2014-15)-ADDCAP FOR 2015-2016 Loan 2-	9.55	0.00	119.67	0.00	119.67
SBI (2014-15)-ADDCAP FOR 2015-2016 Loan 3 (Accrual IDC)	9.55	0.00	0.69	0.00	0.69
SBI (2014-15)-Loan 1-	9.55	197.23	0.00	0.00	197.23
BOND- LII-ADDCAP FOR 2015-2016 Loan 4-	8.32	0.00	12.82	0.00	12.82
Total		197.23	133.18	0.00	330.41

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

(₹in lakh)

Asset I				
Summary	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	197.84	330.40	330.40	330.40
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	0.00
Net Loans Opening	197.84	330.40	330.40	330.40



Asset I				
Summary	2015-16	2016-17	2017-18	2018-19
Add: Draw(s) during the Year	132.56	0.00	0.00	0.00
Less: Repayments of Loan during the year	0.00	0.00	0.00	0.00
Net Closing Loan	330.40	330.40	330.40	330.40
Average Net Loan	264.12	330.40	330.40	330.40
Rate of Interest on Loan (%)	9.550	9.550	9.550	9.550
Interest on Loan	25.22	31.55	31.55	31.55

(₹in lakh)

Asset II				
Summary	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	197.23	330.41	330.41	330.41
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	0.00
Net Loans Opening	197.23	330.41	330.41	330.41
Add: Draw(s) during the Year	133.18	0.00	0.00	0.00
Less: Repayments of Loan during the year	0.00	0.00	0.00	0.00
Net Closing Loan	330.41	330.41	330.41	330.41
Average Net Loan	263.82	330.41	330.41	330.41
Rate of Interest on Loan (%)	9.520	9.502	9.502	9.502
Interest on Loan	25.12	31.40	31.40	31.40

