CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Petition No. 193/TT/2017

Coram:

Shri P.K. Pujari, Chairperson Shri A.K. Singhal, Member Dr. M.K. Iyer, Member

> Date of Hearing : 28.08.2018 Date of Order : 09.10.2018

In the matter of:

Truing up of transmission tariff for 2009-14 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and determination of transmission tariff for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for Asset I: Part of 400 kV D/C Vapi- Navi Mumbai TL (from Vapi Gantry till 1st M/C point at Loc. AP-18) along with bay at Vapi (DOCO: 01.04.13) (executed in contingency arrangement to make it Vapi- Navsari TL) and Asset II: 220 kV D/C Vapi - Khadoli Transmission line along with associated Bays (DOCO: 01.10.10) under WRSS-V Transmission System in WR Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the matter of:

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

.....Petitioner

Versus

- 1. MADHYA PRADESH POWER MANAGEMENT COMPANY LTD. SHAKTI BHAWAN, RAMPUR JABALPUR - 482 008
- 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 CHHATISGAARH-492013
- 8. MADHYAPRADESH AUDYOGIK KENDRA VIKAS NIGAM (INDORE) LTD. 3/54, PRESS COMPLEX, AGRA-BOMBAY ROAD, INDORE-452 008

-- Respondents

For Petitioner: Shri Vivek Kumar Singh, PGCIL

Shri S. K. Venkatesan, PGCIL

Shri S. S. Raju, PGCIL Shri V. P. Rastogi, PGCIL Shri Rakesh Prasad, PGCIL

Shri B. Dash, PGCIL

Shri Pankaj Sharma, PGCIL

For Respondent: Shri Rajiv Kumar Gupta, MPPMCL

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner") for truing up of capital expenditure and tariff for 02 Nos of assets under Western Region Strengthening Scheme-V" (hereinafter referred to as "transmission asset") under Regulation 6 of the Central Electricity Regulatory Commission (Terms

and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations") based on actual capital expenditure for the period from COD of respective assets to 31.3.2014 and for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") for the period from 1.4.2014 to 31.3.2019 for Combined Assets.

- 2. The petitioner has made the following prayers:
 - a. Approve the Trued up Transmission Tariff for the tariff block 2009-14 block for the assets covered under this petition.
 - b. Admit the capital cost as on 31.03.2014 as claimed in the Petition and approve the Additional Capitalization incurred during 2009-14 period and projected to be incurred during the tariff block 2014-19 as claimed in the petition.
 - c. Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition.
 - d. Approve the initial spares for the project as a whole.
 - e. Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided under clause 25 of the Tariff regulations 2014.
 - f. Allow the Petitioner if GST is imposed on transmission charges under the proposed GST the same may be allowed to be recovered from the beneficiaries.
 - g. Allow the Petitioner to approach Hon'ble Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike, if any, during period 2014-19.
 - h. Allow the petitioner 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
- i. Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, and other expenditure (if any) in relation to the filing of petition.
- j. Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.
- k. Allow the Petitioner to bill and recover Service tax on Transmission Charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list at any time in future. Further, any taxes and duties including cess etc. imposed by any statutory/Govt/municipal authorities shall be allowed to be recovered from the beneficiaries.

3. Project Details

Project	Western Region Strengthening Scheme-V.					
	i) Investment approval for this transmission scheme was accorded by					
	Board of Directors of POWERGRID vide letter dated 26.12.2007 at an					
Investment	estimated cost of ₹ 477.69 Crore including IDC of ₹ 34.97 Crore. (based					
Approval &	on 3rd Quarter, 2007 price level). ii) Revised Cost Estimates (RCE) of the project at ₹ 721.81 Crore					
RCE						
	including IDC of ₹ 91.62 Crore (based on 1st quarter, 2012 price level)					
	has been approved by Board of Directors in November 2012.					
Project Scope	 Transmission Lines 1. Vapi – Navi Mumbai 400 kV D/C line 2. LILO of Lonikhand (MSEB) – Kalwa (MSEB) 400 kV S/C line at Navi Mumbai 3. Vapi- Khadoli (UT of DNH) 220 kV D/C line 					
	Substations					
	1. Establishment of 400/220kV New Substation (GIS) at Navi Mumbai					

	2. Extension of 400/220kV Vapi Substation							
	3. Extension of 220/66 kV Khadoli (UT of DNH) Substation.							
Scheduled	As per Investment approval, the project was scheduled to be							
COD of the	control commissioned within 33 months from the date of approval by the							
project Board. Hence the Scheduled COD was 01.10.2010.								
Actual COD	The instant project was partially commissioned during 2009-14 period							
of the	and has been partially commissioned or yet to be commissioned during							
Project	2014-19 period.							

4. Assets Covered in the instant petition

The petitioner has filed the instant petition for true up of tariff for 2009-14 period as well as the tariff for 2014-19 period the following assets which were commissioned during 2009-14 tariff period (hereinafter referred as "transmission assets").

Asset No.	Assets name	Actual COD	Delay
Asset-I	Part of 400 kV D/C Vapi-Navi Mumbai TL (from Vapi Gantry till 1st M/C point at Loc. AP-18) along with bay at Vapi,	01.04.2013	30 months. (18 months not condoned)
Asset-II	220 kV D/C Vapi - Khadoli Transmission line along with associated Bays	01.10.2010	No Time Over- run

- 5. The respondents are distribution licensees and power departments, who are procuring transmission service from the petitioner, mainly beneficiaries of Western Region.
- 6. 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 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.

7. The hearing in this matter was held on 18.01.2018 and 28.08.2018. MPPTCL has filed reply to the petition. The petitioner has submitted the rejoinder vide affidavit dated 28.02.2018. The petitioner was directed to file certain additional information vide ROP dated 18.01.2018. In response, the petitioner has submitted the information vide affidavit dated 09.03.2018 and 17.082018. Having heard the representatives of the petitioner on 28.08.2018 and perused the material on record, we proceed to dispose of the petition.

Capital cost and Tariff allowed in previous petition

8. Commission had approved capital cost and tariff for the period from DOCO of the respective transmission assets to 31.3.2014 in the following petitions.

Asset No. in the instant petition	Previous Petition No	Order date
Asset I	60/TT/2013	09.10.2015
Asset II	241/TT/2013	29.02.2016

9. The capital cost allowed in the above said order is given below:-

₹ In lakh

Asset	Expenditure up to	Capital cost allowed as	Add (Add Cap (As admitted by CERC)			
	DOCO (As claimed)	on DOCO	2010-11	2011-12	2012-13	2013-14	Cost (as allowed)
Asset-I	2756.57	2426.25	0.00	0.00	0.00	286.21	2712.46
Asset-II	2665.95	2590.95	133.48	87.71	207.12	144.87	3163.47

10. The tariff allowed in the above referred orders for the instant assets for the period from their respective COD to 31.3.2014 in terms of the provisions of the 2009 Tariff Regulations are as under:-

(₹ in lakh)

Particulars	Asset-I	Asset II					
Particulars	2013-14	2010-11	2011-12	2012-13	2013-14		
Depreciation	135.91	71.07	147.98	155.76	165.06		
Interest on Loan	153.55	82.16	161.53	157.56	154.19		
Return on Equity	151.15	78.91	164.41	172.98	185.42		
Interest on Working Capital	17.45	5.02	16.59	17.26	18.07		
O & M Expenses	139.69	81.61	172.59	182.44	192.87		
Total	597.76	318.77	663.10	686.00	715.61		

TRUING UP OF ANNUAL FIXED COST FOR TARIFF PERIOD 2009-14

11. The truing up of tariff for the 2009-14 period has been carried out in accordance to Regulation 6 of 2009 Tariff Regulation based on the details of capital expenditure and additional capital expenditure incurred for the period from COD of respective assets to 31.03.2014.

Capital Cost

12. The capital cost for the period from COD to 31.03.2014 has been dealt as per Clause (1) of Regulation 7 of the 2009 Tariff Regulations. Petitioner had submitted the Capital Cost incurred for the instant assets, vide Auditor's Certificate(s) dated 08.03.2017 and 13.10.2014 for asset I and Asset II respectively, which are based on audited accounts up to 31.03.2016. The details of approved apportioned capital cost as per Investment approval/REC and the capital cost claimed as per Auditor certificates are summarized below:

(₹ In lakhs)

Asset	Apportion	ed cost		Actual Cost as per Auditor Certificate				ficate	
	as per IA	as per	CoD Additional capital expenditure				Total		
		RCE	Cost	2010-11	2011-12	2012-13	2013-14	2014-15	Cost
Asset I	3748.90	3748.90	2756.57	0.00	0.00	0.00	286.21	147.14	3189.92
Asset II	2898.92	3277.00	2665.95	133.48	87.71	207.12	144.87	0.00	3239.13
Total	6647.82	7025.90	5422.52	133.48	87.71	207.12	431.08	147.14	6429.05

13. Cost overrun:

The completion cost as on 31.3.2014 as per the Auditor certificate of the respective assets are within the limit of the apportioned approved cost of the respective assets. Thus, there is no cost over-run in case of the instant assets.

14. Treatment of IDC and IEDC

- (i) The petitioner has claimed IDC of ₹408.83 lakh and ₹138.28 lakh for Asset-I and Asset-II respectively as per Auditor's certificate(s) dated 08.03.2017 and 13.10.2014. The petitioner has also submitted IDC computation statement which consist of the name of the loan, Drawl date, loan amount, interest rate and Interest claimed. The IDC has been worked out based on the details given in the IDC statement. However there is a mismatch of loan amount in IDC statement and tariff forms. Thus tariff forms have been relied for Loan amount as on COD and same have been considered to work out IDC.
- (ii) The IDC has been restricted for the not condoned time over run period (i.e. 18 months.
- (iii) The allowed IDC is shown below:-

(₹ in lakh)

Asset	IDC claimed as per Auditor certificate dated 08.03.2017 and 13.10.2014	Auditor cate dated 2017 and disallowed over run/ computational		on cach	IDC liability as on COD*
	1	2	4=(1-2-3)	3	5
Asset-I	408.83	172.55	236.28	236.38	0.00
Asset-II	138.28	0.00	138.28	123.20	15.08

- (iv) The IDC liability as on COD for Asset II has been allowed as additional capital expenditure during the year of discharge i.e. 2010-11.
- (v) The petitioner has claimed an amount of ₹ 174.82 lakh and ₹ 162.10 lakh on account of Incidental Expenditure during Construction (IEDC) for Asset-I and Asset-II respectively. The percentage of 10.75% on Hard Cost indicated in the Abstract Cost Estimate submitted by the petitioner has been considered as the allowable limit of the IEDC. The IEDC claimed is within the percentage of the Hard Cost indicated in the Abstract Cost Estimate as on COD of the respective assets. However in case of Asset-I, out of the entitled IEDC for Asset-I i.e. ₹ 174.82 lakh, ₹ 49.95 lakh have been disallowed on pro rata basis for the not condoned time over run period. Thus allowed IEDC for Asset-I is ₹ 124.87 lakh. In case of Asset-II, entire amount of claimed IEDC is allowed.

15. Treatment of Initial Spares

- i) Initial spare are considered as per Regulation 8 of the 2009 tariff Regulations.
- ii) The petitioner has claimed initial spares pertaining to substation amounting to ₹ 67.96 lakh and ₹ 86.12 lakh respectively in respect of Asset-I and Asset-II. However the year wise discharge details are not available hence presumed that the entire initial spare claims are capitalized and discharged as on COD. Accordingly the initial spare has been worked out and entire excess initial spare has been adjusted from COD cost. The allowable and excess initial spares for the assets covered in the instant petition are given below.

(₹ in lakh)

Asset	Element	Cost as on Cut-off date	Initial spares claimed	Ceiling Limit as per 2009 Tariff Regulations	Initial Spares worked out as per CERC norms	Excess Initial Spares
Asset-I	Sub-Station	1140.37	67.96	2.50%	27.50	40.46
Asset-II	Sub-Station	1247.21	86.12	2.50%	29.77	56.35

16. Capital cost as on COD

The capital cost as on COD considered for tariff has been worked out as under:-

(₹ in lakh)

Asset	Capital cost as on COD claimed by Petitioner	IDC disallowed due to time over run	Un- discharged IDC as on COD	IEDC disallowed on COD.	Excess Initial spares.	Capital Cost as on COD considered for tariff calculation
Asset-I	2756.57	172.55	0.00	49.95	40.46	2493.62
Asset-II	2665.95	0.00	15.08	0.00	56.35	2594.52

17. Additional Capital Expenditure

- i) Additional Capital Expenditure is considered as per Regulation 9 of the 2009 tariff Regulations.
- ii) The cut-off date for Asset I is 31.03.2016 and for and Asset-II is 31.03.2013.
- iii) The ACE claimed by the petitioner vide Auditor certificate dated 08.03.2017 and 13.10.2010. In addition, the petitioner has claimed the IDC liability as ACE during the year in which it is discharged.
- iv) The ACE claimed and allowed for Asset-I from COD to 31.03.2014 is summarized as under:-

Particulars	Regulation	ACE	ACE
		claimed for 2013-14	allowed for 2013-14
Discharge of liabilities on Hard cost	9(1)(i)	286.21	286.21
Discharge of IDC Liability	9(1)(i)	15.76	0.00
Total add-cap		301.97	286.21

v) The ACE claimed from COD to 31.03.2014 for Asset-II is summarized as under:-

(₹ in lakh)

Particulars	Regulation	2010-11	2011-12	2012-13	2013-14
Discharge of liabilities on Hard cost – up to Cutoff date	9(1)(i)	101.58	0.00	0.00	0.00
2. Discharge of liabilities on Hard cost – after Cut off date	9(2)(viii)	0.00	0.00	0.00	144.87
3. Add cap towards works deferred for execution (by addition into gross block)	9(1)(ii)	31.90	87.71	207.12	0.00
4. Discharge of IDC Liability	9(1)(i)	15.08	0.00	0.00	0.00
5. Total add-cap (1+2+3+4)	148.56	87.71	207.12	144.87	

vi) The entire claimed add cap is allowed in case of Asset-II.

18. Capital Cost summary from COD to 31.3.2014

(₹ in lakh)

	Capital cost	ACE allowed			Capital Cost as on	
Asset	allowed as on COD	2010-11	2011-12	2012-13	2013-14	COD considered for tariff calculation
Asset-I	2493.62	0.00	0.00	0.00	286.21	2779.83
Asset-II	2594.52	148.56	87.71	207.12	144.87	3182.78
Total	5088.14	148.56	87.71	207.12	431.08	5962.61

19. Debt: Equity Ratio

- i) Debt: Equity Ratio is considered as per Regulation 12 of the 2009 tariff Regulations.
- ii) The Debt Equity ratio as on COD has been considered based on the Financing details submitted by the petitioner in Form 6. The details of debt: equity ratio of the instant assets as on COD is given below:-

(₹ in lakh)

	Asset-I	Asset-II
Debt%	70.00%	70.00%
Equity%	30.00%	30.00%
Loan	1745.54	1816.17
Equity	748.08	778.35
Total	2493.62	2594.52

- iii) The debt-equity ratio for the additional capital expenditure is considered as 70:30.
- iv) The overall debt equity ratio as on 31.3.2014 for the Assets is as under:-

(₹ in lakh)

	Asset-I	Asset-II
Debt%	70.00%	70.00%
Equity%	30.00%	30.00%
Loan	1945.88	2227.95
Equity	833.95	954.83
Total	2779.83	3182.78

Annual Fixed Cost from COD to 31.3.2014

20. Return on Equity ("ROE")

- i) RoE has been worked out by considering year wise MAT rate submitted by the petitioner in accordance with **Regulation 15** of the 2009 Tariff Regulations.
- ii) The petitioner has submitted the MAT rate applicable during 2009-14 period.

Year	MAT Rate	Grossed up ROE (Base rate/(1-t)
2009-10	16.995	18.674
2010-11	19.931	19.358
2011-12	20.008	19.377
2012-13	20.008	19.377
2013-14	20.961	19.610

- iii) RoE has been worked out by considering year wise MAT rate submitted by the petitioner in accordance with **Regulation 15** of the 2009 Tariff Regulations.
- iv) The trued up ROE allowed for the instant transmission assets under Regulation 15 of the 2009 Tariff Regulations is as follows

(₹ in lakh)

Return on Equity	Asset-I
	2013-14
Opening Equity	748.08
Addition due to Additional	85.86
Capitalization	
Closing Equity	833.95
Average Equity	791.01
Return on Equity (Base	15.50%
Rate)	
Tax rate for the year 2013-	20.960%
14 (MAT)	
Rate of Return on Equity	19.610%
(Pre Tax)	
Return on Equity (Pre Tax)	155.12

	Asset-II					
2010-11	2011-12	2012-13	2013-14			
778.35	822.92	849.23	911.37			
44.57	26.31	62.14	43.46			
822.92	849.23	911.37	954.83			
800.64	836.08	880.30	933.10			
15.50%	15.50%	15.50%	15.50%			
19.931%	20.008%	20.008%	20.9605%			
19.358%	19.377%	19.377%	19.610%			
77.49	162.01	170.58	182.98			

21. Interest on Loan ("IOL")

- i) The petitioner has claimed the IOL based on actual interest rates for each year during the 2009-14 period. We have considered the submissions of the petitioner and accordingly calculated the IOL based on gross amount of normative loan and normative repayment of installments and rate of interest submitted by the petitioner, in accordance with **Regulation 16** of the 2009 Tariff Regulations.
- ii) In the calculations, the IoL has been worked out as detailed below:
 - a) Gross amount of loan, repayment of installments and rate of interest weighted average rate of interest on actual average loan have been considered as per the petition.
 - b) The Debt as determined in Debt-Equity ratio Para has been considered as Gross loan for determination of IOL.
 - c) The normative repayment for the tariff period 2009-14 has been considered to be equal to the depreciation allowed for that period accordingly the cumulative repayment has been worked out.

- d) The Average loan has been arrived after adjusting the cumulative repayments, and the Weighted average rate of loan has been applied to work out the Interest on Loan
- iii) The IOL has been worked out and allowed as under:-

(₹	in	lakh)
17	111	ianii)

Interest on loan	Asset-I
	2013-14
Gross Normative Loan	1745.54
Cumulative Repayment up to	0.00
Previous Year	
Net Loan-Opening	1745.54
Addition due to Add. Cap	200.35
Repayment during the year	139.53
Net Loan-Closing	1806.36
Average Loan	1775.95
Weighted Average Rate of Interest	8.8559%
on Loan	
Interest on Loan	157.28

(1.11.101.11)					
	Asset-II				
2010-11	2011-12	2012-13	2013-14		
1816.17	1920.16	1981.56	2126.54		
0.00	69.93	216.02	369.90		
1816.17	1850.23	1765.54	1756.64		
103.99	61.40	144.98	101.41		
69.93	146.10	153.88	163.17		
1850.23	1765.54	1756.64	1694.88		
1833.20	1807.89	1761.09	1725.76		
8.81%	8.81%	8.83%	8.82%		
80.72	159.23	155.42	152.22		

22. Depreciation

- i) The depreciation is considered in accordance with Regulation 17 of the 2009 Tariff Regulations.
- ii) The useful life for transmission line and sub-station is 35 years and 25 years, respectively. The actual COD of the instant assets is during 2013-14. Hence, the depreciation for the period 2009-14 has been worked out based on straight line method. :-
- iii) The depreciation are worked out as given below.

(₹ in lakh)

Particulars	Asset-I
	2013-14
Opening gross block	2493.62
Addition during 2009-14	286.21
Closing Gross Block	2779.83
Average Gross Block	2636.72
Rate of Depreciation	5.2917%
Depreciable Value	2373.05
Remaining Depreciable Value	2373.05
Depreciation	139.53

Asset-II					
2010-11	2011-12	2012-13	2013-14		
2594.52	2743.08	2830.79	3037.91		
148.56	87.71	207.12	144.87		
2743.08	2830.79	3037.91	3182.78		
2668.80	2786.94	2934.35	3110.35		
5.2403%	5.2421%	5.2440%	5.2460%		
2452.64	4894.03	5026.70	5185.09		
2452.64	4824.10	4810.68	4815.20		
69.93	146.10	153.88	163.17		

23. Operation & Maintenance Expenses ("O&M Expenses")

The O&M Expenses claimed by the petitioner at the time of true-up for the assets covered under the instant petition are allowed as under:-

(₹ in lakh)

Particulars	Asset-I
	2013-14
O & M Expenses	139.69

Asset-II				
2010-11 2011-12 2012-13 2013-14				
81.61	172.59	182.44	192.87	

24. Interest on working capital ("IWC")

- i) Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations provides the components of the working capital for the transmission system and clause (3) of Regulation 18 of the 2009 Tariff Regulations provides for the rate of interest of working capital.
 - a) Maintenance Expenses: 15% of Operation and Maintenance expenses
 - b) O & M Expenses one month of the allowed O&M Expenses
 - c) Receivables 2 months' of annual transmission charges

d) Rate of Interest on Working Capital

- i. As per the 2009 Tariff Regulations rate of interest on working capital has been considered as 13.20% (i.e. SBI base rate 9.70 plus 350 basis points) and 11% (SBI Base Rate 7.50% as on 01-07-2010 + 350 bps) for computing IWC for both the assets.
- ii. The trued up Interest on working capital is given below:

(₹ in lakh)

Interest on Working Capital	Asset-I
	2013-14
Maintenance Spares	20.95
O & M expenses	11.64
Receivables	101.55
Total	134.15
Rate of Interest	13.20%
Interest	17.71

(VIII IUKII)						
	Asset-II					
2010-11	2011-	2012-13	2013-14			
	12					
24.48	25.89	27.37	28.93			
13.60	14.38	15.20	16.07			
52.46	109.40	113.24	118.20			
90.54	149.67	155.81	163.20			
11.00%	11.00%	11.00%	11.00%			
4.98	16.46	17.14	17.95			

25. Annual Fixed Cost (AFC) for 2009-14 tariff period

The trued up annual fixed cost for the tariff period 2009-14 is summarized below:-

(₹ in lakh)

Particulars	Asset-I
Annual Fixed Cost	2013-14
Depreciation	139.53
Interest on Loan	157.28
Return on Equity	155.12
Interest on Working Capital	17.71
O & M Expenses	139.69
Total	609.32

Asset-II					
2010-11	2011-12	2012-13	2013-14		
69.93	146.10	153.88	163.17		
80.72	159.23	155.42	152.22		
77.49	162.01	170.58	182.98		
4.98	16.46	17.14	17.95		
81.61	172.59	182.44	192.87		
314.73	656.39	679.46	709.19		

DETERMINATION OF ANNUAL FIXED COST FOR 2014-19

26. The tariff for the instant transmission assets up to 2009-14 tariff period was being trued-up separately for individual assets from the COD of the respective assets. This led to filing of multiple petitions and computing tariff for multiple assets belonging to the same project. To avoid multiplicity of petitions and granting multiple tariffs for the assets covered under the single project/transmission system for 2014-19 tariff period, the Commission, vide Regulation 6 of the 2014 Tariff Regulations, has brought in the concept of a single consolidated petition wherein a single petition is required to be filed by a

petitioner in case of all the assets which have been put under commercial operation prior to 31.3.2014, so that a single tariff can be granted for all the assets covered under such single project/transmission system. To determine single transmission tariff for different assets, the concept of effective date of commercial operation and weighted average life has also been introduced in Regulation 27 of the 2014 Tariff Regulations. The consolidation of individual assets for single tariff has been done by adding up of the admitted capital cost as on 31.3.2014 of individual assets. The cost are claimed and allowed against the individual asset and the costs are consolidated and used to determine the Annual Fixed Cost determination. The AFC for the consolidated cost has been worked out as given below:-

- (a) **Return on Equity**: The admitted gross normative equity as on 31.3.2014 of individual assets are added to arrive at the gross equity as on 1.4.2014 for the combined assets/project as whole.
- (b) **Interest on Loan**: The admitted gross normative loan and cumulative repayment of loan as on 31.3.2014 of individual assets are added to get the gross normative loan and cumulative re-payment of loan as on 1.4.2014 for the combined assets/project as whole.
- (c) **Depreciation**: The admitted gross capital cost and cumulative depreciation as on 31.3.2014 of individual assets are added to get the gross capital cost and cumulative depreciation as on 1.4.2014 for the combined assets. The useful life and Lapsed life of the combined assets as on 1.4.2014 has been worked out by the concept of Effective COD and Weighted Average life as provided in Regulation 27 of 2014 Tariff Regulations, as detailed in the depreciation paragraph given below.
- (d) Interest on Working capital: Since, the normative working capital is derived from the O&M Expenses and Receivables; it is being worked out accordingly.

- (e) **O&M Expenses**: The entitled O&M Expenses as per 2014 Tariff Regulations of individual assets are worked out and added together to consider as O&M Expenses of the consolidated assets.
- 27. Though the instant assets are consolidated into one combined asset and single tariff is allowed, the petitioner has to maintain the identity of the individual assets. In future tariff petitions, the petitioner has to provide the details of individual assets like description, actual COD, effective COD, cut-off date, admitted capital cost, O&M Expenses claimed, etc. The petitioner is directed to make all future claims of additional capital expenditure or de-capitalization for the project, along with Auditor certificate by clearly mentioning the individual assets to which the claim has been made. Accordingly the relevant tariff forms should show the individual asset wise breakup.
- **28.** The closing balance as on 31.03.2014 of individual assets are consolidated to arrive the opening balance of the project as whole/combined assets as given under.

Particulars as on 31-03-2014	Asset I	Asset II	Combined Asset as on 01.04.2014
Admitted Capital Cost (₹ in lakh)	2779.83	3182.78	5962.61
Cumulative Depreciation (₹ in lakh)	139.53	533.07	672.59
Debt %	70%	70%	70.00%
Gross Equity (₹ in lakh)	833.95	954.83	1788.78
Gross Loan (₹ in lakh)	1945.88	2227.95	4173.83
Cumulative Re-payment of Loan (₹ in lakh)	139.53	533.07	672.59

29. The petitioner has claimed the transmission charges for combined asset for the 2014-19 tariff period as under

(₹ in lakh)

Combined Assets	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	321.70	325.59	325.59	325.59	325.59
Interest on Loan	299.29	274.99	246.24	217.47	188.70
Return on equity	355.94	360.26	360.26	360.26	360.26
Interest on Working	39.39	39.58	39.50	39.44	39.39
O & M Expenses	306.01	316.16	326.68	337.49	348.72
Total	1322.33	1316.58	1298.27	1280.25	1262.66

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance	45.90	47.42	49.00	50.62	52.31
O & M	25.50	26.35	27.22	28.12	29.06
Receivables	220.39	219.43	216.38	213.38	210.44
Total	291.79	293.20	292.60	292.12	291.81
Interest	39.39	39.58	39.50	39.44	39.39
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%

31. Capital Cost for 2014-19 period

i) The admissibility of capital cost during the period 2014-19 are dealt in accordance with Clause (1) & (3) (a) and (b) of Regulation 9 and Regulation 14 of the 2014 Tariff Regulations specify as follows:-

ii) Capital Cost as on 1.4.2014.

The capital cost allowed as on 31.3.2014, for the instant assets are clubbed together and the combined capital cost of the all the assets as on 31.3.2014 amounting ₹ 5962.61 lakh, has been considered as an Opening admitted capital cost as on 1.4.2014 in accordance with clause 9(3) of 2014 Tariff Regulation.

has claimed capital cost of individual assets which includes the additional capitalization for the 2014-19. The summary of approved apportioned cost, Capital cost admitted as on 01.04.2014 and additional capital expenditure claimed during 2014-19 period and the capital cost as on 31.03.2019 of all the assets are shown below:-

(₹ in lakh)

Name of the asset	Apportioned cost as per IA	Apportioned cost as per RCE	Admitted Capital cost as on 31.03.2014	Add cap claimed for 2014-15	Capital cost as on 31.03.2019
Asset-I	3748.90	3748.90	2779.83	147.14	2926.97
Asset-II	2898.92	3277.00	3182.78	0.00	3182.78
Total	6647.82	7025.90	5962.61	147.14	6109.75

iv) The capital cost mentioned in Auditor certificate are derived as per books of account but the liability details are not mentioned in the certificate. It creates difficulties in reconciliation with the cost and liability given in Form 4A. Therefore liability amount mentioned in tariff forms are relied up on to determine the allowable cost. The petitioner is directed to submit the asset wise Auditor certificate by clearly mentioning the liability amount and whether the certified cost is inclusive of liability or exclusive of liability at the time of true up of 2014-19 petitions.

v) Cost over-run

Against the apportioned approved cost as per RCE of ₹ 7025.90 lakh, the capital cost as on 31.3.2019 is ₹ 6124.83 lakh. Hence, there is no cost over-run for both the assets covered in the instant petition.

vi) Treatment of IDC&IEDC liability.

The admitted IDC liability as on COD are allowed as additional capital expenditure during the 2009-14 tariff period itself. Hence there is no un-discharged IDC liability as on 01.04.2014. The petitioner has submitted that the entire IEDC has been discharged as on COD itself. Hence, there is No IEDC liability as on 01.04.2014 for both the assets.

vii) Treatment of initial spares

The entire excess initial spares have been considered during 2009-14 period. Hence no adjustment is required during 2014-19 period for the individual assets covered in the instant petition.

viii) Additional Capital Expenditure

The additional capital expenditure are dealt in accordance with Clause 1 & 2 of Regulation 14 of 2014 Tariff Regulations. The cut-off date for Asset-I was 31.03.2016 and for Asset II is 31.03.2013. During 2014-19 tariff period, the petitioner has not claimed additional capital expenditure for Asset II, but claimed ACE only for Asset I for 2014-15. Regulation wise claimed and allowed ACE for Asset I is summarized as under.

(₹ in lakh)

Asset I	Reg.	Claimed ACE for 2014-15	Allowed ACE for 2014-15
Discharge liabilities on Hard cost	14(1)(i)	0.00	0.00
Addition into Gross block towards	14(1)(ii)		
works deferred for execution		147.14	147.14
Total add-cap Allowed		147.14	147.14

The above allowed ACE is considered as ACE for combined asset for 2014-19 period.

ix) Capital Cost summary

(₹ in lakh)

Asset	Capital cost allowed as on 01.04.2014	ACE for the year 2014-19	Capital Cost as on 31.03.2019 considered for tariff calculation
1	2	3	4= (1+2+3)
Asset I	2779.83	147.14	2926.97
Asset II	3182.78	0.00	3182.78
Combined Asset	5962.61	147.14	6109.75

32. Debt: Equity Ratio

- i) The debt equity ratio has been considered in accordance with clause 19 (1), (3) and (5) of 2014 Tariff Regulation. Accordingly the debt-equity ratio allowed by Commission for individual assets for determination of tariff for the period ending 31.03.2014 has been consolidated and considered as opening debt equity ratio of the project as on 01.04.2014.
- ii) The debt equity ratio of 70:30 has been considered for the Additional capital expenditure allowed during 2014-19 in accordance to clause 19(3) of 2014 Tariff Regulation.
- iii) The details of the debt: equity as on 1.4.2014 and 31.03.2019 for the project as whole is considered for the purpose of tariff for the 2014-19 tariff period is as follows:-

(₹ in lakh)

Particulars	01.04.2014	31.03.2019
Debt%	70.00%	70.00%
Equity%	30.00%	30.00%
Loan (in lakh)	4173.83	4276.83
Equity (in lakh)	1788.78	1832.92
Total	5962.61	6109.75

Annual Fixed Cost for 2014-19 period

33. Return on Equity ("ROE")

- i) The petitioner has claimed ROE at the rate of 19.61% for the 2014-19 period after grossing up the ROE of 20.961% with MAT rate as per the above said Regulation. 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.
- ii) The ROE has been worked out in accordance with Regulations 24 and 25 of the 2014 Tariff Regulations. The rate of pre-tax return on equity for all the financial year during 2014-19 period has been determined by grossing up the base rate of 15.50% with effective tax rate of 20.961%. This rate of pre-tax return on equity is subject to true up based on the effective tax rate of respective financial year applicable to the petitioner company. Accordingly, the RoE allowed is as follows:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	1788.78	1832.92	1832.92	1832.92	1832.92
Addition due to Additional Capitalization	44.14	0.00	0.00	0.00	0.00
Closing Equity	1832.92	1832.92	1832.92	1832.92	1832.92
Average Equity	1810.85	1832.92	1832.92	1832.92	1832.92
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
MAT Rate	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.611%	19.611%	19.611%	19.611%	19.611%
Return on Equity (Pre Tax)	355.13	359.45	359.45	359.45	359.45

34. Interest on Loan ("IOL")

i. We have considered the weighted average rate of IOL on the basis of rate prevailing as on 1.4.2014. The IOL has been worked out in accordance with



Regulation 26 of the 2014 Tariff Regulations as detailed below:-

- (a) It is observed that the actual loan portfolio of individual assets as considered for the true up purpose has been added together for the balance as on 1.4.2014. The loan portfolio as submitted by the petitioner has been considered for determining WAROI.
- (b) Now, the gross amount of loan, repayment of installments and rate of interest on actual loans as mentioned in Form 9C have been considered which is subject to true up.
- (c) The yearly repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that year.
- (d) Weighted average rate of interest on actual average loan worked out as per (i) above is applied on the normative average loan during the year to arrive at the interest on loan.
- ii. The details of weighted average rate of interest are placed at Annexure and the IOL has been worked out and allowed as follows

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	4173.83	4276.83	4276.83	4276.83	4276.83
Cumulative Repayment up	672.59	993.51	1318.31	1643.11	1967.92
to previous year					
Net Loan-Opening	3501.24	3283.32	2958.52	2633.72	2308.92
Additions during the year	103.00	0.00	0.00	0.00	0.00
Repayment during the year	320.92	324.80	324.80	324.80	324.80
Net Loan-Closing	3283.32	2958.52	2633.72	2308.92	1984.12
Average Loan	3392.28	3120.92	2796.12	2471.32	2146.52
Rate of Interest (%)	8.826%	8.817%	8.815%	8.812%	8.809%
Interest	299.40	275.17	246.49	217.78	189.08

35. Depreciation

i) The depreciation is dealt in accordance with the Regulation 27 of 2014 Tariff Regulation. As discussed in above paragraphs, the lapsed life of the combined assets as on 1.4.2014 has been worked out by the concept of Effective COD and Weighted Average life as provided in Regulation 27 of 2014 Tariff Regulations.

Effective Date of Commercial Operation (E-COD) of the project

The Effective Date of Commercial Operation (E-COD) for the combined assets has been worked out based on the admitted capital cost of individual assets as on 31.3.2014 and the actual COD of individual Assets, as shown below:-

Asset No.	Actual DOCO	Admitted Capital Cost as on 31-03-14	Weight of the cost	No. of days from last COD	Weighted days	Effective COD (Latest COD - Total Weighted days)
Asset- I	1-Apr-13	2779.83	46.62%	0.00	0.00	20 44 44
Asset -II	1-Oct-10	3182.78	53.38%	913.00	487.35	30-11-11
Total		5962.61	100.00%		487.35	

The above determined effective COD represents only for the asset commissioned during the 2009-14 tariff period. Since the instant Project is partially commissioned during 2009-14 period and remaining during the 2014- 19 period, the effective COD of the project as whole shall be determined once the entire scope of the project has been commissioned. Therefore, the petitioner is directed to submit a combined petition for all the assets covered under the scope of the project at the time of truing-up for the period 2014-19 so that, the effective COD for the project as whole shall be re-determined at the time of truing-up of 2014-19 period.

iii) Weighted Average Life (WAL) of the project.

The combined asset, have multiple elements (i.e. Land, Building, Transmission line, Substation and PLCC) and each element are having different span of life. Therefore, in 2014 Tariff Regulations, the concept of Weighted Average Life (WAL) has been introduced which has been used as the useful life of the project as whole. The WAL has been determined based on the admitted capital cost of individual elements of assets as on 31-03-2014 and their respective life as stipulated in 2014- 19 Tariff Regulations. The element wise life as it was defined in Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in 2014 Regulation for the individual assets has been considered for determination of WAL for the project as whole. Accordingly, the WAL of the combined assets has been worked out as 31 years as under:-

Determination of Weighted Average Life of the Project Assets commissioned during 2009-14 tariff period								
Particulars	Admitted Capital Cost as on 01-04-2014		Combined Cost	Life as per 2014	Weight (a) x (b)			
	Asset I Asset II		(a)	Regulation (b)				
Freehold Land	0.00	0.00	0.00	0	0.00			
Leasehold Land	0.00	0.00	0.00	25	0.00			
Building & Other Civil Works	0.00	0.00	0.00	25	0.00			
Transmission Line	1679.92	1964.92	3644.84	35	127569.37			
Sub-Station Equipment	1070.61	1037.03	2107.65	25	52691.16			
PLCC	29.30	180.83	210.13	15	3151.88			
Total	31	183412.41						
Wei	Weighted Average life							

The above determined Weighted Average Life is applicable only for the assets covered in the instant petition (i.e. assets commissioned during 2009-14 period) and it shall be re-assessed for the project as whole once the entire project is

commissioned.

- iv) Lapsed Life of the project/combined assets as on 01.04.2014: The E-COD as determined above shall be used only to determine the lapsed life as on 01.04.2014 for the combined assets. The lapsed life as on 01.04.2014 refers the number of completed years as on 01.04.2014 starting from E-COD). The lapsed life (in completed years) of the instant project as on 1.4.2014 has been worked out as 2 years.
- v) Remaining useful life of the project/combined assets: The remaining useful life of the combined assets as on 1.4.2014 has been worked out as 29 years. (I.e. Weighted Average life minus lapsed life as on 01.04.2014). The remaining useful life of the project as whole shall be determined once the entire scope of the instant project has been commissioned. The usage of weighted average life of the combined assets as determined above has been applied prospectively for determination of depreciation. (i.e. 01.04.2014 onwards) and no retrospective adjustment of depreciation in previous tariff period is required since the depreciation considered for the individual assets up to 31.03.2014 are added together to arrive the cumulative depreciation of the project as on 01.04.2014. The Cumulative Depreciation of the project as on 1.4.2014 has been computed as ₹672.59 lakh.
- vi) The capital cost, E-COD, WAL and lapsed life for the combined assets as determined in above paragraphs are considered for computation of depreciation for the period 2014-19. The lapsed life of the project as on 01.04.2014 is 2 years hence, the 12 years from the effective date of commercial operation is completing beyond the tariff period 2014-19. Hence, the depreciation for entire

tariff period (i.e. 2014-19) has been worked out based on Straight Line Method and at rates specified in Appendix-II to 2014 Tariff Regulations.

vii) The details of the depreciation allowed for the project as whole are given hereunder:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19	
Opening Gross block	5962.61	6109.75	6109.75	6109.75	6109.75	
Additional Capitalization	147.14	0.00	0.00	0.00	0.00	
Closing Gross block	6109.75	6109.75	6109.75	6109.75	6109.75	
Average gross block	6036.18	6109.75	6109.75	6109.75	6109.75	
Rate of Depreciation (%)	5.32%	5.32%	5.32%	5.32%	5.32%	
Depreciable Value	5432.56	5498.78	5498.78	5498.78	5498.78	
Remaining Depreciable	4759.97	4505.26	4180.46	3855.66	3530.86	
Value						
Depreciation	320.92	324.80	324.80	324.80	324.80	

36. Operation & Maintenance Expenses ("O&M Expenses")

i) The O&M Expenses claimed by the petitioner are as under:-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses for combined	306.01	316.16	326.68	337.49	348.72
asset					

ii) The petitioner has submitted that O&M Expenses for the 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 Company is due during the period 2014-19 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.

- iii) We have considered the submissions made by the petitioner. 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, we would like to clarify that any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.
- iv) The details of O&M Expenses allowed for the instant assets are given hereunder:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	306.01	316.16	326.68	337.49	348.72
Allowed					

37. Interest on Working Capital ("IWC")

- i) As per 2014 Tariff Regulations the components of the working capital and the interest thereon are discussed hereinafter:
 - a) Maintenance spares: Maintenance spares @ 15 % of Operation and Maintenance expenses specified in Regulation 28.
 - **b)** O & M expenses: O&M expenses have been considered for one month of the O&M expenses
 - c) Receivables: The receivables have been worked out on the basis of 2 months' of annual fixed cost as worked out above.
 - d) Rate of interest on working capital: As per Clause 28 (3) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, SBI Base Rate (10.00%) as on 01.04.2014 Plus 350 Bps i.e. 13.50 % have been considered as the rate of interest on working capital.
- ii) The interest on working capital allowed is shown in the table below:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	45.90	47.42	49.00	50.62	52.31
O & M Expenses	25.50	26.35	27.22	28.12	29.06
Receivables	220.13	219.19	216.15	213.16	210.24
Total	291.54	292.96	292.37	291.90	291.61
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	39.36	39.55	39.47	39.41	39.37

38. Annual Transmission Cost

The detailed computation of the various components of the annual fixed cost for the transmission asset for the tariff period 2014-19 is summarized below:-

(₹ in lakh)

Annual Transmission	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	320.92	324.80	324.80	324.80	324.80
Interest on Loan	299.40	275.17	246.49	217.78	189.08
Return on Equity	355.13	359.45	359.45	359.45	359.45
Interest on Working Capital	39.36	39.55	39.47	39.41	39.37
O & M Expenses	306.01	316.16	326.68	337.49	348.72
Total	1320.81	1315.13	1296.89	1278.93	1261.43

39. Filing Fee and Publication Expenses

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 filing fee and other expenses may not be allowed. The petitioner is 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.

40. Licence Fee and RLDC Fees and Charges.

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.

41. Service Tax

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. We have considered the submission of the petitioner. Service tax is not levied on transmission. Further, service tax is subsumed by GST and hence petitioner's prayer is infructuous.

42. Goods and Services Tax

The petitioner has prayed for reimbursement of tax, if any, on account of proposed implementation of GST. The petitioner has submitted that the Commission should allow to recover GST from the beneficiaries, if imposed on transmission charges under the proposed GST when implemented by Government of India. GST is not levied on transmission service at present and we are of the view that petitioner's prayer is premature.

43. Sharing of Transmission Charges

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.

. This order disposes of Petition No.193/TT/2017.

Sd. Sd. Sd.

(Dr. M. K. Iyer) (A.K. Singhal) (P.K. Pujari)

Member Member Chairperson



Order in Petition No. 134/TT/2017