

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 146/TT/2016

Coram:

**Shri Gireesh B. Pradhan, Chairperson
Shri A.K. Singhal, Member
Shri A.S. Bakshi, Member
Dr. M.K. Iyer, Member**

Date of Order: 03.11.2017

In the matter of:

Truing up of transmission tariff for 2009-14 tariff period and determination of transmission tariff for 2014-19 tariff period for **Asset-I:** +/- 500 kV D/C Mundra-Mohindergarh HVDC bi-pole transmission line with associated sub-stations, bays, electrode lines and associated 400 kV lines (Deemed COD: 1.10.2013) and **Asset-II:** 400 kV D/C Mundra-Dehgam transmission line with associated system (Deemed COD: 1.10.2013), under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

And in the matter of:

Adani Transmission (India) Limited,
(Earlier in the name of Adani Power Limited),
Shikhar, Nr. Adani House,
Mithakhali Six Roads, Navarangpura,
Ahmedabad-380 009

.....**Petitioner**

Vs

1. Power Grid Corporation of India Limited,
Saudamini, Plot-2, Sector-29,
Near IFFCO Chowk,
Gurgaon-122 001
2. National Load Despatch Centre,
B-9, Qutab Industrial Area,
Katwaria Sarai, New Delhi-110 016
3. Northern Regional Load Despatch Centre,
18-A, Shaheed Jeet Singh Sansanwal Marg,
Katwaria Sarai, New Delhi-110 016
4. Western Regional Power Committee,
F-3, MIDC Area, Marol, Opp. SEEPZ,



Central Road, Andheri (East), Mumbai-400093

5. Central Electricity Authority,
Sewa Bhawan, Sector-1,
R.K. Puram, New Delhi-110 066
6. Gujarat Energy Transmission Company Limited,
Sardar Patel Vidyut Bhawan,
Race Course, Vadodra-390 007
7. Haryana Vidyut Prasaran Nigam Limited,
1st Floor, Shakti Bhawan,
Sector-6, Panch Kula-134 109, Haryana
8. Gujarat UrjaVikas Nigam Limited,
Sardar Patel VidyutBhawan,
Race Course, Vadodra-390 007
9. Maharashtra State Electricity Distribution Co. Limited,
"Prakashgarh", Bandra (East),
Mumbai-400051, Maharashtra
10. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Vidyut Nagar,
Rampur, Jabalpur (MP)-482 008
11. M.P. Audyokik Kendra Vikas Nigam Limited,
Free Press House, 1st Floor, 3/54-Press Complex,
A.B. Road, Indore-452 008,
Madhya Pradesh
12. Chattisgarh State Power Distribution Company Limited,
Vidyut Seva Bhawan Parisar,
Dangania, Raipur-492 013, Chattisgarh
13. Goa State Electricity Department,
Vidyut Bhawan, Panaji,
Goa-403 001
14. Daman and Diu Electricity Department,
Administration of Daman & Diu,
Near Satya Narayan Temple,
Nani Daman-396 210
15. Electricity Department,
Administration of Dadra Nagar Haveli,
Dadra Nagar Haveli UT, Silvassa-396 230.
16. Heavy water Projects, Department of Atomic Energy,
Heavy Water Board, Vikram Sarabhai Bhawan,



Anushakti Nagar, Mumbai-400 094

17. Jindal Power Limited,
Tamnar, Raigarh,
Chattisgarh-496 001
18. Torrent Power Limited,
Torrent House, Opp. Ashram Road,
Ahmedabad-380009
19. PTC India Ltd.
2nd Floor, NBCC Tower,
15, Bhikaji Complex, New Delhi-110066
20. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula, (Haryana)-134 109
21. Rajasthan Power Procurement Centre,
Room No. 24, VidyutBhawan, Janpath,
Jyoti Nagar, Jaipur- 302 005, Rajasthan
22. Jodhpur VidyutVitran Nigam Limited,
New Power House Industrial Area,
Jodhpur-342 003, Rajasthan
23. Jaipur Vidyut Vitran Nigam Limited,
Vidyut Bhawan, Janpath, Jyoti Nagar,
Jyoti Marg, Jaipur-302 005, Rajasthan
24. Ajmer Vidyut Vitran Nigam Limited,
Old Power House, Hathi Bhatta,
Jaipur Road, Ajmer-305 001, Rajasthan
25. BSES Yamuna Power Limited,
Shakti Kiran Building,
Karkardooma,
Delhi-110 092
26. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi-110 019
27. Tata Power Delhi Distribution Limited,
Cennet Building, 33 kV Sub-station Building,
Hudson Lines, Kingsway Camp, Delhi-110 009
28. New Delhi Municipal Council,
Palika Kendra Building, Opposite Jantar Mantra,
Parliament Street, New Delhi-110 001



29. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun-248 001
30. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226 001
31. North Central Railway,
Allahabad, Uttar Pradesh.
32. Punjab State Power Corporation Limited,
The Mall, Ablowal, Patiala-147 001
33. Power Development Department,
Jammu and Kashmir, Civil Secretariat,
Jammu-180 001
34. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Shimla-171 004
35. Electricity Department,
UT Chandigarh,
Sector-9, Chandigarh
36. Northern Regional Power Committee,
18-A, Qutab Institutional Area,
Shaheed Jeet Singh Marg,
Katwaria Sarai, New Delhi-110 016
37. Western Regional Power Committee,
F-3, M.I.D.C. Area, Marol, Andheri(East),
Mumbai-400 093
38. Kanpur Electricity Supply Company Limited (NR),
14/71, Civil Lines, Kanpur-208 001
39. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg,
Jaipur- 302 005
40. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110 002

.....Respondents

For Petitioner: Shri Saahil Kaul, Advocate for ATIL
Shri Hemant Singh, Advocate for ATIL
Shri Harish Priyani, ATIL
Shri Bhavesh Kundalia, ATIL

For Respondents: Sh. Rajeev Kumar Gupta, MPPMCL



ORDER

The present petition has been filed by Adani Transmission (India) Ltd. ('the petitioner') for true-up of tariff based on actual expenditure for the tariff period 2009-2014 for **Asset-I:** +/- 500 kV D/C Mundra-Mohindergarh HVDC bi-pole transmission line with associated sub-stations, bays, electrode lines and associated 400 kV lines and **Asset-II:** 400 kV D/C Mundra-Dehgam transmission line with associated system (hereinafter referred to as "the transmission assets"), under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations") and for determination of tariff for the period from 1.4.2014 to 31.3.2019, under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations").

2. The brief facts of the case are as under:-

a. The petitioner filed Petition No. 44/TL/2012 for grant of transmission licence for the instant transmission lines as they are being used as ISTS lines. The Commission vide order dated 29.7.2013 in Petition No. 44/TL/2012 granted the license and held that the instant transmission assets will be considered as part of ISTS system from the date of grant of license i.e. 29.7.2013.

b. The final tariff was allowed for the period 1.10.2013 to 31.3.2014 vide order dated 18.3.2016 in Petition No. 184/TT/2013, considering the deemed COD as 1.10.2013. The tariff allowed was as given below:-



Particulars	(₹ in lakh)	
	Asset-I 2013-14 (pro-rata)	Asset-II 2013-14 (pro-rata)
Depreciation	9355.58	1394.81
Interest on Loan	5446.52	632.45
Return on Equity	10769.85	1584.55
Interest on Working Capital	710.52	115.87
O&M Expenses	2505.80	641.22
Total	28788.27	4368.90

c. Final tariff determined vide order dated 18.3.2016 in Petition No. 184/TT/2013 was based on allowed capital cost of ₹362892.41 lakh and ₹54016.90 lakh as on 1.10.2013 and ₹371388.41 lakh and ₹54016.90 lakh as on 31.3.2014, in case of Asset-I and Asset-II respectively. The additional capital expenditure considered for Asset-I during 2013-14 period was ₹8496.00 lakh.

d. The MAT rate applicable as on 2013-14 was considered to arrive at rate of return on equity for the tariff period 2009-14, which is required to be adjusted in case of any change in AFC, at the time of truing up of tariff for 2009-14 tariff period.

3. This order has been issued after considering the petitioner's affidavits dated 21.12.2016, 2.1.2017, 9.1.2017 and 3.4.2017.

4. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act, 2003 ("the Act"). The petitioner has served the petition on the respondents. U.P. Power Corporation Limited (UPPCL), Respondent No. 30, has filed replies vide affidavits dated 5.11.2016 and 18.4.2017. Madhya Pradesh Power Management Company Limited (MPPMCL), Respondent No. 10 and Delhi



Transco Limited (DTL), Respondent No. 40 have filed replies vide affidavits dated 28.11.2016 and 21.4.2017 respectively. UPPCL has submitted that the petitioner has filed an appeal against the order dated 18.3.2016 in Petition No. 184/TT/2013 and has raised the issues of increase in capital cost, rise in weighted average rate of interest on loan from 4.71% to 12.46%, rise in depreciation, return on equity and interest on working capital, which are due to increase in capital cost. MPPMCL has also raised the issue of petitioner's appeal against order dated 18.3.2016 in Petition No. 184/TT/2013 stating that though the petitioner has claimed truing-up w.e.f. 29.7.2013, the same should be w.e.f. 1.10.2013, as already decided in Petition No. 184/TT/2013. MPPMCL has raised other issues of unexplained variation of ₹272 lakh towards sub-head "Miscellaneous", difference in actual amount from discharged amount for period from 29.7.2013 to 30.9.2013 and reconciliation of same, break-up of undischarged liabilities, initial spares, O&M Expenses, absence of detailed statement of capital cost in Form-9A, FERV, additional capital expenditure and change in loan portfolio. DTL has submitted that it has been erroneously impleaded as a respondent contrary to the functions assigned in terms of the Department of Power, GNCRD vide letter dated 28.6.2006, in view of which statutory transfer of responsibility and changes in the functions of DTL w.e.f. 1.4.2007 have taken place and it has no role in the instant petition. The petitioner has submitted rejoinder to the replies of UPPCL vide affidavits dated 20.12.2016 and 20.4.2017 and to the reply of MPPMCL vide affidavit dated 20.12.2016. The petitioner has not submitted rejoinder to the reply of DTL. The issues raised by the respondents and the clarifications raised by the petitioner are dealt in the respective paragraphs of this order.



5. The hearing in the matter was held on 14.2.2017. Having heard the representatives of the petitioner, respondents and perused the material on record, we proceed to dispose of the petition.

6. The annual trued-up transmission charges claimed by the petitioner for 2013-14 period is as follows:-

Particulars	(₹ in lakh)	
	2013-14 (pro-rata) (1.10.2013 to 31.3.2014)	
	Asset-I	Asset-II
Depreciation	9371.16	1395.13
Interest on Loan	14463.98	1673.35
Return on Equity	10809.40	1584.94
Interest on Working Capital	914.65	139.30
O&M Expenses	2506.58	641.22
Total	38065.77	5433.94

Truing-up of Annual Fixed Charges for Period 2009-14

7. The truing up of tariff for 2009-14 has been determined as discussed below.

Date of Commercial Operation (CoD)

8. The petitioner was granted transmission licence for the instant transmission assets on 29.7.2013 and the petitioner claimed tariff for the assets from the date of licence, i.e. 29.7.2013 in Petition No.184/TT/2013. After the issue of transmission licence to a dedicated transmission line, the system operator has to make certain arrangements with respect to control area jurisdiction, scheduling, metering location, transmission charges and losses under PoC mechanism, etc. After taking into account all these requirements, it was decided in a meeting chaired by Chairperson, CEA, on 5.9.2013, with the attendance of all stakeholders including the representative of the petitioner that the entire required infrastructure would be put in place by 1.10.2013. Further, the instant transmission assets were used as an ISTS with effect from 1.10.2013,



Accordingly, the Commission approved the COD of the instant transmission assets as 1.10.2013 vide order dated 18.3.2016 in Petition No. 184/TT/2013. The petitioner has filed an Appeal No. 1393 of 2016 before Hon'ble Appellate Tribunal for Electricity (Tribunal) with regard to issue of COD. There is no stay or interim directions with regard to COD. Therefore, we proceed with the true up petition by taking the date of commercial operation as 1.10.2013, subject to the outcome of the appeal.

9. As the availability norms specified for AC and HVDC system are different in the 2009 Tariff Regulations and 2014 Tariff Regulations, the tariff is to be worked out separately for the AC and HVDC portions. In the absence of separate details of AC and HVDC system, the Commission in order dated 18.3.2016 had allowed tariff for Asset I on consolidated basis. However, the incentive in respect of AC and HVDC portions were allowed in proportion to the capital cost of AC and HVDC portion. The relevant extract of the said order is as under:-

“Sharing of Transmission Charges

90. The transmission charges determined through this order shall be ... view. Since the tariff of Asset-I has been worked out on consolidated basis the calculation of incentive in respect of HVAC and HVDC shall be in proportion to the capital cost of HVAC and HVDC as allowed in this order”

10. The petitioner has submitted the separate capital cost of AC and HVAC portions of Asset I duly certified by Statutory Auditor. However, the petitioner has not submitted separate details of additional capitalisation, undischarged liabilities and FERV with respect to AC and HVAC portions of Asset I. In the absence of this information, it is not possible to work out separate tariff for AC and HVAC portions of Asset I. As such, tariff for Asset I is trued up on consolidated basis for the 2009-14 tariff period and the incentive in respect of HVAC and HVDC portions shall be



in proportion to the capital cost of AC and HVDC portion as allowed in order dated 18.3.2016. Further, the tariff for Asset I for the 2014-19 tariff period is also allowed on a consolidated basis and separate tariff for AC and HVDC portions of Asset I shall be allowed at the time of truing up of the 2014-19 tariff on furnishing of the relevant information by the petitioner.

Capital Cost

11. Regulation 6 of the 2009 Tariff Regulations provides as under:-

“6. Truing up of Capital Expenditure and Tariff.

(1) The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014, as admitted by the Commission after prudence check at the time of truing up.

Provided that the generating company or the transmission licensee, as the case may be, may in its discretion make an application before the Commission one more time prior to 2013- 14 for revision of tariff.

(2) The generating company or the transmission licensee, as the case may be, shall make an application, as per Appendix I to these regulations, for carrying out truing up exercise in respect of the generating station a unit or block thereof or the transmission system or the transmission lines or sub-stations thereof by 31.10.2014;

(3) The generating company or the transmission licensee, as the case may be, shall submit for the purpose of truing up, details of capital expenditure and additional capital expenditure incurred for the period from 1.4.2009 to 31.3.2014, duly audited and certified by the auditors;

(4) Where after the truing up, the tariff recovered exceeds the tariff approved by the Commission under these regulations, the generating company or the transmission licensee, as the case may be, shall refund to the beneficiaries or the transmission customers, as the case may be, the excess amount so recovered along with simple interest at the rates specified in the proviso to this regulation.

(5) Where after the truing up, the tariff recovered is less than the tariff approved by the Commission under these regulations, the generating company or the transmission licensee, as the case may be, shall recover from the beneficiaries or the transmission customers, as the case may be, the under-recovered amount along with simple interest at the rates specified in the proviso to this regulation.

(6) The amount under-recovered or over-recovered, along with simple interest at the rates specified in the proviso to this regulation, shall be recovered or refunded by the generating company or the transmission licensee, as the case may be, in six equal monthly installments starting within three months from the date of the tariff order issued by the Commission after the truing up exercise.



Provided that the rate of interest, for clauses (4), (5) and (6) of this regulation, for calculation of simple interest shall be considered as under:

(i) SBI short-term Prime Lending Rate as on 01.04.2009 for the year 2009-10.

(ii) SBI Base Rate as on 01.07.2010 plus 350 basis points for the year 2010-11.

(iii) Monthly average SBI Base Rate from 01.07.2010 to 31.3.2011 plus 350 basis points for the year 2011-12.

(iv) Monthly average SBI Base Rate during previous year plus 350 basis points for the year 2012-13 & 2013-14.”

12. The details of the capital cost claimed by the petitioner as on 1.10.2013 and approved vide order dated 18.3.2016 in Petition No. 184/TT/2013 are as under:-

Particular	Allowed on estimated basis	Being claimed/submitted based on actual	
		AC	HVDC
(₹ in lakh)			
Asset-I			
Capital cost as on 1.10.2013 as per Auditors' Certificate	396705.00	26679.00	370026.00
Additions from 29.7.2013 to 1.10.2013 (on accrual basis)	Less:17763.00 (on accrual basis)	Less:17763.00 Add: 2621.07(on cash)*	
Less: Capital Cost disallowed in the previous order	16049.59	16049.59*	
Opening Capital cost as on 1.10.2013	362892.41	365513.48*	
Add: Additional Capitalization	3644.00	864.00*	
Add: Undischarged Liabilities	4852.00	3081.00*	
Add: Capital Advances capitalized in 2013-14 after 30.9.2013 along with soft cost	-	1989.00*	
Closing Capital Cost Allowed	371388.41	371447.48	
Asset-II			
Capital cost as on 1.10.2013 as per Auditors' Certificate	57340.00	57340.00	
Additions from 29.7.2013 to 1.10.2013 (on accrual basis)	Less:12.00 (on accrual basis)	Add: 12.00 (on cash basis)	
Less: Capital Cost disallowed in the previous order	3311.10	3311.10	
Capital Cost as on 1.10.2013	54016.90	54028.90	
Add: Additional Capitalization	-	-	
Add: Undischarged Liabilities	-	-	
Closing Capital Cost Allowed	54016.90	54028.90	

(*break up between AC and HVDC is not available)

13. The petitioner has claimed the following capital cost for the instant transmission assets:-



(₹in lakh)

Particulars	2013-14 (1.10.2013 to 31.3.2014)	
	Asset-I	Asset-II
Capital cost as on 1.10.2013	365513.48	54028.90
Add: Additional capitalisation	864.00	0.00
Add: Un-discharged liabilities	3081.00	0.00
Sub-total	3945.00	0.00
Add: Capital advances capitalised in 2013-14 after 30.9.2013 along with soft cost	1989.00	0.00
Closing capital cost	371447.48	54028.90

14. Regulation 7 of the 2009 Tariff Regulations provides as follows:-

“(1) Capital cost for a project shall include:-

(a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan-(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 fund deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.

(b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and

(c) additional capital expenditure determined under regulation 9:

Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:

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

16. As there was variation in the capital cost claimed by the petitioner as on 29.7.2013 and 30.9.2013, the Commission directed the petitioner to submit the



reasons for variation at the time of truing-up. The relevant part of the order dated 18.3.2016 is extracted below:-

“32. A comparison of the capital cost as on 29.7.2013 and as on 30.9.2013 shows that there is a difference of Rs.177.23 crore in respect of Asset 1 and Rs.0.12 crore in respect of Asset 2. However, the petitioner has not submitted the reasons for variation in capital cost between 29.7.2013 and 30.9.2013 i.e. whether on account of additional capitalisation or undischarged liabilities or for any other reason. Since sufficient information for variation in capital cost between 29.7.2013 and 30.9.2013 is not available, the Commission has decided to calculate the tariff on the basis of capital cost as on 30.9.2013 by excluding the additions during the intervening period. In order to protect the interest of the petitioner, the Commission allows the petitioner to submit the detailed reasons for variation in the capital cost at the time of truing up which shall be considered in accordance with the regulations.”

17. The petitioner has submitted actual expenditure on cash basis for the period from 29.7.2013 to 30.9.2013 for Asset-I and Asset-II. The petitioner has claimed capital cost of ₹365513.48 lakh and ₹54028.90 lakh, as on 1.10.2013, for Asset-I and Asset-II, respectively.

18. UPPCL has submitted that the Commission has approved ₹371388.41 lakh as capital cost of Asset-I against which the petitioner has claimed ₹371447.48 lakh for the period 2009-14 and thereby there is an increase of ₹59.07 lakh in capital cost of Asset-I. Similarly, the Commission has approved ₹54016.90 lakh as capital cost of Asset-II against which the petitioner has claimed ₹54028.90 lakh for the period 2009-14 and thereby there is an increase of ₹12.0 lakh in the capital cost of Asset-II. UPPCL has further submitted that whereas the total additional capitalization during 2014-15 has been shown as ₹16345.00 lakh out of this amount, the certificate of Statutory Auditor has been submitted for ₹995.00 lakh only and the balance amount of ₹15350.00 lakh is not supported by the certificate of the Auditor.



19. In response, the petitioner has submitted that the tariff allowed in Petition No. 184/TT/2013 was based on the capital cost admitted by the Commission as on 1.10.2013 and the additional capital expenditure after 1.10.2013 on provisional basis. There is bound to be a difference in the actual additional capital expenditure and additional capital expenditure admitted on provisional basis. The petitioner has further submitted that the capital cost admitted by the Commission did not factor the additional capital expenditure from 29.7.2013 to 30.9.2013.

20. MPPMCL has submitted that all the relevant figures and data submitted by the petitioner in instant petition relating to true-up and tariff determination may be revised and corrected to be in tune with the order dated 18.3.2016, in order to protect the answering respondent from serious financial hardship and prejudice. The CoD of the assets should be maintained as 1.10.2013. The period from 29.7.2013 to 30.9.2013 needs to be excluded for the purpose of true-up and tariff determination as already decided in order dated 18.3.2016. MPPMCL has further submitted that the petitioner's claim of ₹272 lakh under the sub-head 'miscellaneous' has not been properly explained and mere submission of Auditor's Certificate is not sufficient. MPPMCL has also submitted that the variations of ₹12 lakh in case of Semi Station Store Yard are unjustified. In response, the petitioner has clarified that the increase in the expenditure under the sub-head 'miscellaneous' is the result of actual additional capital expenditure of booked during 29.7.2013 to 30.9.2013 and pertains to part payments made for System Study and Cost Escalation.



21. We have considered the submissions of the petitioner and the respondents. The petitioner's claim of capital cost has been reconciled with the gross block as on 1.10.2013 as shown below:-

(₹ in lakh)			
Particulars	Asset-I	Asset-II	Total
Gross Block as on 1.10.2013	395106	57340	452446
Less: un-discharged liabilities	*19734	0	19734
Gross Block (on cash basis)	375372	57340	432712
Less: Amount disallowed in order dated 18.3.2016 (excluding capital advances)	9598.59	3311.10	12909.69
Less: Discharges between 29.7.2013 to 30.9.2013, not considered by petitioner**	260.00	0	260.00
Capital cost claimed	365513.48	54028.90	419542.38

* Arrived based on information in the petition and order dated 18.3.2016 (**₹4852 lakh** being opening liability **plus ₹16610.00 lakh** being liability addition between 29.7.2013 to 30.9.2013 **minus ₹1728.00 lakh** being discharges from 29.7.2013 to 30.9.2013 as certified by auditor).

** As per Auditor certificate

22. The petitioner has submitted that out of the undischarged liabilities of ₹4852 lakh outstanding as on 29.7.2013, the petitioner has discharged ₹1468.00 lakh during 29.7.2013 and 30.9.2013. Accordingly, the petitioner has claimed capital cost as on 1.10.2013. However, as per the Auditor certificate, the amount discharged from 29.7.2013 to 30.9.2013 is shown as ₹1728 lakh. Thus, there is a gap of ₹260 lakh between amount of discharges as claimed by the petitioner and that certified by the Auditor. We have considered the Auditor certified gross block as the base capital cost. Accordingly, discharge of ₹1728 lakh has been considered as against the petitioner's claim of ₹1468 lakh for the purpose of tariff.

23. Amounts of ₹9598.59 lakh and ₹3311.10 in case of Asset I and II respectively were disallowed as on 1.10.2013. The said amount has been arrived at as shown below:-



(₹ in lakh)		
Particulars	Asset-I	Asset-II
Hard cost disallowed	7403.00	2970.00
Add: Corresponding IDC	743.86	183.66
Add: Corresponding IEDC	491.98	83.62
Add: Corresponding FERV	959.75	0.00
Add: Initial spares	0.00	73.83
Total disallowed	9598.59	3311.10

24. The IDC, IEDC and FERV corresponding to disallowed hard cost of ₹7403.00 lakh and ₹2970.00 lakh, has been worked out considering the IDC, IEDC and FERV as on 29.7.2013 (date of grant of licence). Since, the capital cost has been admitted considering the gross block values as on 1.10.2013, the IDC, IEDC and FERV corresponding to disallowed hard cost has been revised.

25. Considering the IDC, IEDC and FERV corresponding to the gross block as on 1.10.2013 and after rectifying the ministerial errors in the amount calculated above, the IDC, IEDC and FERV to be disallowed works out as shown below:-

(₹ in lakh)		
Particulars	Asset-I	Asset-II
Hard cost disallowed	7403.00	2970.00
Add: Corresponding IDC	837.06	200.95
Add: Corresponding IEDC	496.42	79.36
Add: Corresponding FERV	1824.47	0.00
Total disallowed	10560.94	3250.31

Initial Spares

26. MPPMCL has submitted that the petitioner has not provided the details of initial spares procured by it between the periods 29.7.2013 to 30.9.2013 for capitalisation.

27. We have considered the submissions of the petitioner and MPPMCL. The initial spares claimed by the petitioner are within the ceiling limit specified in Regulation 8 of the 2009 Tariff Regulations. Accordingly, the initial spares claimed by the petitioner are allowed



28. In view of above, the following capital cost has been worked out for the instant assets as on 1.10.2013:-

Particulars	(₹ in lakh)	
	Asset-I	Asset-II
Gross Block as on 01.10.2013	395106	57340
Less: un-discharged liabilities included above	19734	0
Gross Block (on cash basis)	375372	57340
Less: Amount disallowed	10560.94	3250.31
Less: Misc. items not allowed	272.00	0
Capital cost allowed	364539.06	54089.69

Additional Capital Expenditure

29. The additional capital expenditure claimed by the petitioner is as shown below:-

Particulars	(₹ in lakh)	
	Asset-I	Asset-II
ACE as per books	1599.00	0.00
Add: Discharges of un-discharges liabilities	3945.00	0.00
Add: IDC, IEDC & FERV corresponding to ₹1599 lakh capital advances deducted as on 1.10.2013, in order dated 18.3.2016	390.00	0.00
ACE claimed	5934.00	0.00

30. MPPMCL has submitted that the petitioner has not submitted a detailed statement of capital cost as required in Form 9A and element-wise project cost as required in Form 5B. The petitioner has also not submitted the detailed break-up of additional capital expenditure claimed as mentioned in para 34 of the petition.

31. The petitioner has submitted the following justification in support of the additional capital expenditure claimed during 1.10.2013 and 31.3.2014:-



(₹ in lakh)

Srl. No.	Work/Equipment proposed to be added after CoD up to cut off date	Amount Capitalized/ proposed to be capitalized	Justification as per purpose	Regulation under which covered
1	Transmission Line	71.00	ERS, Security System	As approved by the Commission under Regulation 9 in order dated 18.3.2016
2	Sub-station	761.00	Cost Escalation /PV Balance Payment, System Study	
3	Building & Civil Works	32.00	Colony	
4	Substation	3081.00	Deferred payment of FERV on LC/ Loan, as on 29.7.2013 Subsequently discharged	
5	Sub-station	548.56	Capital Advance Disallowed + Corresponding Soft Cost	
	Transmission Line	14.93	-do-	Regulation 9(1) of the 2009 Tariff Regulations.
	Free Hold land	1425.51	-do-	
	Total	5934.00		

32. Clause (1) of Regulation 9 of the 2009 Tariff Regulations provides as follows:-

“9. Additional Capitalisation:

1. The capital expenditure 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;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, subject to the provisions of regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in law:

Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.”

33. Clause (11) of Regulation 3 of the 2009 Tariff Regulations defines “cut-off” date as follows:-



“cut-off date” means 31st March of the year closing after 2 years of the year of commercial operation of the project, and in case 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 3 years of the year of commercial operation”.

34. Therefore, the cut-off date in case of the instant assets is 31.3.2016.

35. We have considered the submissions of the petitioner and the respondents.

The admissibility of additional capital expenditure incurred is to be dealt in accordance with the provisions of Regulation 9(1) of the 2009 Tariff Regulations.

The petitioner has claimed additional capital expenditure of ₹5934 lakh in case of Asset I and no claim has been made with respect to Asset II. A part of the expenditure pertaining to township and colony at Mohindergarh including other necessary infrastructure, Cost Escalation/PV/Balance Payment, Emergency Restoration System and Security System have already been considered by the Commission in order dated 18.3.2016 under Regulation 9(1)(i) and 9(1)(ii) of the 2009 Tariff Regulations. The petitioner’s claim for additional capital expenditure is based on the additional capital expenditure approved by the Commission in order 18.3.2016. In order dated 18.3.2016, the Commission had deducted the IDC and IEDC amounting to ₹390 lakh corresponding to the amount of advance of ₹1599 lakh which should not have been considered for the purpose of tariff. However, no such capital advances has been deducted to arrive at the admissible capital cost as on 1.10.2013, as such disallowance of IDC, IEDC and FERV corresponding to such advances does not arise. Accordingly, petitioner's claim of ₹390.00 lakh over and above the ACE as per books and discharged is disallowed. Accordingly, ACE as shown below has been considered for the purpose of tariff:-



(₹ in lakh)		
Particulars	Asset-I	Asset-II
ACE as per books	1599.00	0.00
Add: Discharges of un-discharges liabilities	3945.00	0.00
ACE claimed	5544.00	0.00

36. In view of the above, the capital cost as shown below has been considered for the purpose of tariff period 2009-14:-

Particulars	(₹ in lakh)	
	2013-14 (1.10.2013 to 31.3.2014)	
	Asset-I	Asset-II
Opening capital cost	364539.06	54089.69
Add: Additional capital expenditure	5544.00	0.00
Closing capital cost	370083.06	54089.69

Debt: Equity

37. Clause (1) of Regulation 12 of the 2009 Tariff Regulations provides that:-

“12. Debt-Equity Ratio. (1) For a project declared under commercial operation on or after 1.4.2009, 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, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Explanation.- The premium, if any, raised by the generating company or the transmission licence, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilized for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”



38. The petitioner has claimed tariff considering debt-equity ratio of 70:30 for the 2009-14 tariff period. In order dated 18.3.2016, debt-equity ratio of 70:30 has been considered for the purpose of computation of tariff for 2009-14 tariff period. The petitioner in affidavit dated 5.12.2014 in Petition No. 184/TT/2013 has submitted the Auditor certified position of equity contribution amounting to ₹132753 lakh as on 29.7.2013. The same equity contribution is observed in the audited financial statements as on 31.3.2014. The Commission in its order dated 31.7.2017 in Review Petition No. 56/RP/2016 in Petition No. 134/TT/2015 has considered the debt-equity ratio of 69.43:30.57 computed based on equity as per audited financial statements for arriving at the normative debt-equity ratio. As this debt-equity ratio is within the normative debt-equity ratio norm of 70:30, the same has been considered for the purpose of tariff.

39. The details of the debt: equity considered for the purpose of computation of tariff for 2009-14 tariff period for the instant assets as on COD and as on 31.3.2014 are as under:-

Particulars	(₹ in lakh)							
	Asset-I				Asset-II			
	Position as on 1.10.2013		Position as on 31.3.2014		Position as on COD		Position as on 31.3.2014	
	Amount	%	Amount	%	Amount	%	Amount	%
Debt	255177.34	70.00	259058.14	70.00	37862.79	70.00	37862.79	70.00
Equity	109361.72	30.00	111024.92	30.00	16226.91	30.00	16226.91	30.00
Total	364539.06	100.00	370083.06	100.00	54089.69	100.00	54089.69	100.00

Return on Equity ("RoE")

40. Clause (3), (4) and (5) of the Regulation 15 of the 2009 Tariff Regulations provides as follows:-

“(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.



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

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

Where “t” is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee, as the case may be, shall recover the shortfall or refund the excess Annual Fixed Charge 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:

Provided further that Annual Fixed Charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.”

41. The petitioner has claimed RoE by grossing-up base rate of 15.50% with MAT rate for 2013-14, which is as per the above said regulation. Accordingly, ROE allowed is shown below:-

Particulars	(₹ in lakh)	
	2013-14 (1.10.2013 to 31.3.2014) (pro-rata)	
	Asset-I	Asset-II
Opening Equity	109361.72	16226.91
Add: Addition due to ACE	1663.20	0.00
Closing Equity	111024.92	16226.91
Average Equity	110193.32	16226.91
Pre-tax rate of Return on Equity	19.610%	19.610%
Return on Equity (Pre-tax)*	10774.85	1586.69

Interest on Loan (“IOL”)

42. Regulation 16 of the 2009 Tariff Regulations provides as under:-

“16. **Interest on loan capital** (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:



(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

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.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

43. The petitioner has claimed interest on loan based on actual interest rates for each year during the 2009-14 tariff period.

44. In order dated 18.3.2016, tariff was determined considering Weighted Average Rate of Interest (WAROI) of 4.7112%. The loan portfolio comprised of seven foreign currency loans aggregating to about 88.65% of loan and balance 11.35% was a Rupee Term Loan (RTL) from UCO Bank. Against this, the petitioner has now claimed interest on normative loan considering WAROI of



12.46% computed based on RTL. This revised loan portfolio is in accordance with the discussion in the Board Resolution dated 30.7.2013. As per the said board resolution submitted by the petitioner, there was no clarity in the RBI Guidelines on transfer of ECB loan in such situations. In absolute terms, WAROI on RTL is higher than WAROI based on ECB. However, ECB attaches other costs such as FERV, Hedging costs, Credit charge and commission as also noted in the SBI Capital Markets Ltd. Report dated 9.9.2013 submitted by the petitioner. The said report of SBI Capital Markets Ltd. infers that transfer of RTL to new transmission entity will be beneficial for the transmission entity and this would also keep the tariff lower, based on its analysis under two situations viz. (i) transfer of corresponding debt through RTL and (ii) Transfer of External Commercial Borrowings. As per the report, the said inference is based on prevailing market conditions with standard disclaimer. Therefore, considering the report of an expert agency, namely, SBI Capital Markets Ltd., we are allowing interest at the rate of 12.46% on RTL based on the report of SBI Cap.

45. The normative Interest on Loan has been computed as under:-

- i) The gross normative loan corresponding to approved debt-equity ratio as on 1.10.2013 works out to ₹255177.34 lakh and ₹37862.79 lakh corresponding to Asset-I and Asset-II, respectively.
- ii) The Commission in order dated 18.3.2016 has reduced gross normative loan as on 1.10.2013 corresponding to Asset-I and Asset-II by ₹20469 lakh and ₹10192 lakh, respectively. This was considered as deemed cumulative repayment of loan corresponding to cumulative depreciation of ₹20630 lakh and ₹10192 lakh existing as on 1.10.2013 corresponding to Asset-I and



Asset-II, respectively as per books of accounts of the petitioner. While doing so, the assets disallowed upto 1.10.2013 was not considered. The commutative depreciation figure has been worked out corresponding to pruned capital cost. Accordingly, on account of such rectification the deemed cumulative repayment as on 1.10.2013 for Asset-I and Asset-II works out to ₹20078.57 lakh and ₹9614.27 lakh, respectively. The same has been considered as cumulative repayment as on 1.10.2013 to work out the outstanding loan.

iii) Depreciation allowed for the period under consideration has been considered as repayment.

iv) Average net loan is calculated as average of opening and closing.

v) WAROI as stated above has been considered.

46. The interest on normative loan computation is as shown below:-

Particulars	(₹ in lakh)	
	2013-14 (1.10.2013 to 31.3.2014) (pro-rata)	
	Asset-I	Asset-II
Gross Normative Loan	255177.34	37862.79
Cumulative Repayment upto Previous Year	20078.57	9614.27
Net Loan-Opening	235098.77	28248.52
Addition due to Additional Capitalisation	3880.80	0.00
Repayment during the year	9341.42	1396.71
Net Loan-Closing	229638.15	26851.81
Average Loan	232368.46	27550.16
Weighted Average Rate of Interest on Loan	12.46%	12.46%
Interest	14438.19	1711.83

Depreciation

47. Clause (42) of Regulation 3 of the 2009 Tariff Regulations defines useful life as follows:-



“‘useful life’ in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:-

.....

(c) AC and DC sub-station	25 years
(d) Hydro generating station	35 years
(e) Transmission line	35 years”

48. Further, Clause (4) of Regulation 17 of the 2009 Tariff Regulations provides as follows:-

“17. **Depreciation** (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site;

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

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

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) 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.”

49. The petitioner has claimed depreciation considering weighted average rate of depreciation (WAROD) of 5.10% and 5.18% for Asset-I and Asset-II, respectively for 2009-14. The said depreciation rates have been considered for the purpose of tariff. The petitioner has further submitted that the cumulative



depreciation submitted by it upto 30.9.2013 and as on 1.10.2013 is based on the claimed capital cost and the cumulative depreciation also includes the depreciation on account of disallowed capital cost. Cumulative depreciation as provided by the petitioner has been corrected to the extent of disallowed assets. Thus, out of the total cumulative depreciation as on 1.10.2013 as provided by the petitioner amounting to ₹20630 lakh for Asset-I and ₹10192 lakh for Asset-II has been bifurcated as under:-

(₹ in lakh)			
Particulars	Total cumulative depreciation as provided by the petitioner	Cumulative depreciation pertaining to assets disallowed as worked out	Cumulative depreciation pertaining to allowable assets and considered now for tariff
Asset-I	20630	551.43	20078.57
Asset-II	10192	577.73	9614.27

Thus, cumulative depreciation as on 1.10.2013 amounting to ₹20078.57 lakh for Asset-I and ₹9614.27 lakh for Asset-II has been considered while calculating the remaining depreciation value for the purpose of tariff.

50. The trued up depreciation worked for the instant assets for 2013-14 is as shown below:-

Particulars	(₹ in lakh)	
	2013-14 (1.10.2013 to 31.3.2014) (pro-rata)	
	Asset-I	Asset-II
Average capital cost	367311.06	54089.69
Depreciable value	325116.95	48012.92
Remaining depreciable value	305038.38	38398.66
Rate of depreciation	5.10%	5.18%
Depreciation	9341.42	1396.71



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

51. The petitioner has submitted that O&M Expenses for 2 km of Electrode Line at Mohindergarh Sub-station were disallowed out of the 187 km and allowed O&M Expenses only for 185 km in order dated 18.3.2016 without giving any reasons. The petitioner has claimed the O&M Expenses for 187 km length of Electrode Line at Mohindergarh Sub-station in the instant petition.

52. As per the license granted to the petitioner, the total line length of the electrode Line at Mohindergarh Sub-station is 185 km and not 187 km. The petitioner has submitted that the line length of 185 km indicated by the petitioner in Petition No. 44/TL/2012 while seeking transmission license was based on estimates. However, during actual execution, due to certain RoW issues at Village Berwa Tehsil Meham and other few locations, there was minor variation in actual length of the transmission line by 2 km. The petitioner has submitted that the actual line length should be considered to work out the tariff for the purpose of true up in accordance with the 2009 Tariff Regulations.

53. MPPMCL has submitted that the petitioner has claimed O&M Expenses for 187 km length of Electrode line at Mohindergarh Sub-station instead of 185 km already allowed in order dated 18.3.2016. The petitioner cannot re-agitate the issue once decided in true-up and subsequent tariff determination. The petitioner should have filed an appeal in the competent forum instead of raising in subsequent tariff determination and true up. Hence, the said expenses may not to be allowed in present petition. In response, the petitioner has submitted that the Commission has inadvertently missed out allowing O&M Expenses for 2 km of Electrode Line at Mohindergarh Sub-station. It is incorrect to state that the said



expenses have been disallowed by the Commission when there has been no mention of the same in the order dated 18.3.2016, and as such the same is liable to be considered while truing-up of the expenses.

54. We have considered the submissions of the petitioner and the respondents. Though licence was granted for 185 km of Electrode Line at Mohindergarh Sub-station, it is observed that the length of the said line increased by 2 km at the time of execution due to RoW issues at Berwa Village. This aspect was not brought to the notice of the Commission at the time of allowing final tariff in order dated 18.3.2016. As the actual length of the said line is 187 km, we have allowed O&M Expenses considering the actual length of 187 km. The O&M Expenses allowed for the instant assets for 2013-14 are as under:-

(₹ in lakh)

Asset-I	
Element	2013-14
Mundra Switchyard (400 KV bays) - 9 Nos (6 line bays, 2 Bus sectionalizers and 1 Bus Reactors)	294.570
Mohindergarh HVAC Switchyard (400 kV bays) - 4 Nos	130.920
HVDC Transmission Line Length-990 km	581.130
Pole-I and II of 2500 MW of Bi-pole HVDC Stations (O&M=2500*C/2000) (₹ in lakh)	1326.250
33 kV D/C Electrode Line at Mundra Station-32 km*	12.528
33 kV D/C Electrode Line at Mohindergarh Station-187 km	73.211
400 kV D/C Mohindergarh-Bhiwani (Twin Moose)-50 km	19.575
400 kV D/C Mohindergarh-Dhanonda (Quad Moose)-5 km	2.935
Bhiwani Switchyard (400 kV bays)- 2 bays	65.460
Total	2506.579

(₹ in lakh)

Asset-II	
Element	2013-14 (pro-rata)
400 kV D/C Mundra-Sami (Twin Moose)-282 km	110.403
400 kV D/C Dehgam-Sami (Twin Moose)-152 km	59.508
Mundra Switchyard (400 kV bays)-4 nos.	130.92
Mundra Switchyard (220 kV ICT bays)-2 nos.	45.82
Sami Sub-station (400 kV bays)-7 nos. (4 line, 1 bus reactor, 2 FSC)	229.11
Dehgam (PG) Sub-station (400kV Bays)-2 nos.	65.46
Total	641.221



Interest on Working Capital (“IWC”)

55. 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.

56. The components of the working capital and interest thereon admissible to the petitioner have been computed as under:-

i) **Receivables:** It has been worked out on the basis of 2 months transmission charges.

ii) **Maintenance Spares:** It has been worked out @ 15% of the O&M Expenses approved above.

iii) **O&M Expenses:** It has been worked out on the basis of 1 month of O&M Expenses approved above.

iv) **Rate of Interest on Working Capital:** Rate of interest of 13.20%, considered in order dated 18.3.2016, is considered for the purpose of tariff calculation.

57. The IWC trued up for the instant assets is as under:-

(₹ in lakh)

Particulars	2013-14 (1.10.2013 to 31.3.2014) (pro-rata)	
	Asset-I	Asset-II
Maintenance Spares	754.04	192.89
O & M Expenses	418.91	107.16
Receivables	12692.66	1830.58
Total	13865.61	2130.63
Rate of Interest	13.20%	13.20%
Interest	912.62	140.24



Annual Transmission Charges for 2009-14 Tariff Period

58. The trued up annual transmission charges for the instant assets for 2013-14 period are summarized hereunder:-

Particulars	(₹ in lakh)	
	2013-14 (1.10.2013 to 31.3.2014) (pro-rata)	
	Asset-I	Asset-II
Depreciation	9341.42	1396.71
Interest on Loan	14438.19	1711.83
Return on Equity	10774.85	1586.69
Interest on working capital	912.62	140.24
O&M expenses	2506.58	641.22
Total	37973.67	5476.68

Determination of Annual Transmission Charges for 2014-19 tariff period

59. The petitioner has claimed AFC for the combined assets for the 2014-19 period as under:-

Particulars	(₹ in lakh)				
	Asset-I				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	19334.98	19780.33	19803.24	19803.24	19803.24
Interest on Loan	28844.45	26048.23	24277.42	21779.24	19263.26
Return on Equity	22333.55	22954.71	22984.54	22984.54	22984.54
Interest on Working Capital	1827.37	1798.76	1771.08	1726.23	1681.87
O&M Expenses	3688.37	3888.65	4100.98	4327.62	4570.41
Total	76028.73	74470.68	72937.26	70620.86	68303.32

Particulars	(₹ in lakh)				
	Asset-II				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	2797.93	2797.93	2797.93	2797.93	2797.93
Interest on Loan	3166.42	2698.12	2416.17	2063.73	1709.84
Return on Equity	3178.59	3193.99	3193.99	3193.99	3193.99
Interest on Working Capital	275.92	267.80	263.67	258.00	252.37
O&M Expenses	1175.16	1214.37	1254.60	1296.25	1339.23
Total	10594.02	10172.21	9926.37	9609.90	9293.36

60. Similarly, the petitioner has submitted details in support of its claim for interest on working capital for combined assets as under:-



(₹ in lakh)

Particulars	Asset-I				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	553.00	583.00	615.00	649.00	686.00
O & M Expenses	307.00	324.00	342.00	361.00	381.00
Receivables	12671.00	12412.00	12156.00	11770.00	11384.00
Total	13536.01	13324.01	13119.01	12786.09	12458.32
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	1827.37	1798.76	1771.08	1726.23	1682.00

(₹ in lakh)

Particulars	Asset-II				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	176.27	182.16	188.19	194.44	200.89
O & M Expenses	97.93	101.20	104.55	108.02	111.60
Receivables	1765.67	1695.37	1654.39	1601.65	1548.89
Total	2043.87	1983.73	1953.13	1911.11	1869.38
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	275.92	267.80	263.67	258.00	252.37

61. The first proviso to Regulation 6 of the 2014 Tariff Regulations provides as follows:-

“6. Tariff determination

(1) Tariff in respect of a generating station may be determined for the whole of the generating station or stage or generating unit or block thereof, and tariff in respect of a transmission system may be determined for the whole of the transmission system or transmission line or sub-station or communication system forming part of transmission system:

Provided that:

(i) where all the generating units of a stage of a generating station or all elements of a transmission system have been declared under commercial operation prior to 1.4.2014, the generating company or the transmission licensee, as the case may be, shall file consolidated petition in respect of the entire generating station or transmissions system for the purpose of determination of tariff for the period 2014-15 to 2018-19:

Xxx
Xxx”

62. As per the above said provision, the petitioner should have claimed combined tariff for +/- 500 kV D/C Mundra-Mohindergarh HVDC bi-pole transmission line with associated sub-stations, bays, electrode lines and



associated 400 kV lines and 400 kV D/C Mundra-Dehgam transmission line with associated system. However, the petitioner has claimed separate tariff for Asset I and Asset II for the 2014-19 tariff period. As such, tariff is allowed individually for Asset I and Asset II for the 2014-19 tariff period. The petitioner is directed to claim combined tariff for Assets I and II at the time of truing-up of the 2014-19 tariff period.

Capital Cost

63. Regulation 9 of the 2014 Tariff Regulations provides as under:-

“(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.

“(3) The Capital cost of an existing project shall include the following:

(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;



(b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and

(c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.

xxx

xxx”

64. The details of the capital cost claimed by the petitioner for the 2014-19 tariff period are as under:-

Asset I

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	371447.48	387792.48	388801.48	388801.48	388801.48
Add: Projected Additional capitalisation	16345.00	1009.00	0.00	0.00	0.00
Closing capital cost	387792.48	388801.48	388801.48	388801.48	388801.48

Asset II

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	54028.90	54028.90	54028.90	54028.90	54028.90
Add: Projected Additional capitalisation	0.00	0.00	0.00	0.00	0.00
Closing capital cost	54028.90	54028.90	54028.90	54028.90	54028.90

65. The petitioner has claimed capital cost of ₹371447.48 lakh and ₹54028.90 lakh, as on 1.4.2014, for Asset-I and Asset-II, respectively. However, the capital cost admitted as on 31.3.2014 is ₹370083.06 lakh and ₹54089.69 lakh for Asset-I and Asset-II, respectively. The admitted capital cost as on 31.3.2014 has been considered as opening capital cost as on 1.4.2014.



Additional Capital Expenditure

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

“Additional Capitalisation and Decapitalisation

(1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

(i) Undischarged liabilities recognised to be payable at a future date;

(ii) Works deferred for execution;

(iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;

(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and

(v) Change in Law or compliance of any existing law:

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

67. The details of the additional capital expenditure claimed by the petitioner are as shown below:-

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
16345.00	1009.00	0.00	0.00	0.00

68. MPPMCL has submitted that the petitioner has not submitted the statement of liability flow in respect of undischarged liability and further discharge of liability by actual payment for 2014-15 and 2015-16. UPPCL has submitted that the total additional capital expenditure has been shown as ₹16345 lakh but the certificate of the Auditor has been submitted only to the extent of ₹995 lakh and the rest of the amount aggregating to ₹15350 is not supported by the Auditor's Certificate.



UPPCL has further submitted that the total additional capital expenditure in Form 7 is ₹1009 lakh but the certificate of the Auditor for 2015-16 aggregates to ₹16359 lakh. UPPCL has requested to direct the petitioner to rectify the figures and submit the Auditor's Certificate in respect of additional capital expenditure of ₹338 lakh in respect of civil works and transmission line during 2015-16.

69. The petitioner, vide affidavit dated 3.4.2017, has submitted the item wise break up of additional capitalization and it is as under:-

Srl. No.	Particular	2014-19	
		2014-15	2015-16
1	Township & Colony at Mohindergarh including Other necessary	5.99	0.50
2	Cost Escalation/PV/Balance Payment	3.82	1.4
3	Security System	0.14	1.48
4	Deferred payment of FERV accruing between to 30.9.2013 on LC/borrowing/vendor on 29.7.2013	153.50	0.00
5	Deferred payment of FERV upto 29.7.2013 on vendor Payment/ Retention LC	0.00	6.71
	Total	163.45	10.09

70. We have considered the submissions of the petitioner and the respondents. Additional capital expenditure during 2014-19 is mainly on account of spill over of the expenditure related to township and colony at Mohindergarh Sub-station and the Security System to 2014-19 tariff period, cost escalation, price variation, balance payment. The petitioner has claimed this additional capital expenditure under Regulation 14(1)(i) and (ii) of the 2014 Tariff Regulations. The additional capital expenditure claimed by the petitioner is on account of undischarged liabilities and balance/deferred payment and it is within the "cut off" date, as such it is allowed as it is admissible under 14(1)(i) of the 2014 Tariff Regulations. In



view of the above, the capital cost as shown below has been considered for the purpose of 2014-19 tariff period:-

(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	370083.06	386428.06	387437.06	387437.06	387437.06
Add: Projected Additional capitalisation	16345.00	1009.00	0.00	0.00	0.00
Closing capital cost	386428.06	387437.06	387437.06	387437.06	387437.06
Average capital cost	378255.56	386932.56	387437.06	387437.06	387437.06

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	54089.69	54089.69	54089.69	54089.69	54089.69
Add: Projected Additional capitalisation	0.00	0.00	0.00	0.00	0.00
Closing capital cost	54089.69	54089.69	54089.69	54089.69	54089.69
Average capital cost	54089.69	54089.69	54089.69	54089.69	54089.69

Debt: EquityRatio

71. Clause 3 of Regulation 19 of the 2014 Tariff Regulations specifies as follows:-

“(3) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2014, debt:equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.”

72. The petitioner has claimed tariff considering debt-equity ratio of 70:30 for both the assets. The gross normative loan and equity of ₹259058.14 lakh and ₹111024.92 lakh as on 31.3.2014 has been considered for Asset-I. Similarly, the gross normative loan and equity of ₹37862.79 lakh and ₹16226.91 lakh as on 31.3.2014 has been considered for Asset-II. Further, for the purpose of ACE debt-equity ratio of 70:30 has been considered, subject to true-up.



73. The debt:equity ratio of 70: 30 was admitted after true-up for the tariff period ending 31.3.2014 for instant assets. The same debt: equity ratio i.e. 70: 30 of combined asset has been considered for add-cap during 2014-19 as well. The details of the debt:equity as on 1.4.2014 and 31.3.2019 considered for the purpose of tariff for the 2014-19 tariff period are as under:-

(₹ in lakh)

Particulars	Position as on 1.4.2014		Position as on 31.3.2019	
	Amount	%	Amount	%
Asset I				
Debt	259058.14	70.00	271205.94	70.00
Equity	111024.92	30.00	116231.12	30.00
Total	370083.06	100.00	387437.06	100.00
Asset II				
Debt	37862.79	70.00	37862.79	70.00
Equity	16226.91	30.00	16226.91	30.00
Total	54089.69	100.00	54089.69	100.00

Return on Equity (RoE)

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

“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system 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:

Provided that:

(i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in **Appendix-I:**

(ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:

(iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:



(iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:

(v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:

(vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.

“25. Tax on Return on Equity:

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non generation or non transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”.

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

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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.”

75. The petitioner has claimed RoE by grossing-up base rate of 15.50% with the MAT rate for 2014-15 and 2015-16, for the year 2014-15 and the period 2015-19, respectively. However, for the present base rate of 15.50% has been grossed up with the MAT rate for 2014-15, subject to true-up, for the purpose of tariff for the period 2014-19. Accordingly, ROE has been calculated as shown under:-



(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	111024.92	115928.42	116231.12	116231.12	116231.12
Addition due to Additional Capitalisation	4903.50	302.70	0.00	0.00	0.00
Closing Equity	115928.42	116231.12	116231.12	116231.12	116231.12
Average Equity	113476.67	116079.77	116231.12	116231.12	116231.12
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	22252.77	22763.24	22792.92	22792.92	22792.92

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	16226.91	16226.91	16226.91	16226.91	16226.91
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Equity	16226.91	16226.91	16226.91	16226.91	16226.91
Average Equity	16226.91	16226.91	16226.91	16226.91	16226.91
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	3182.10	3182.10	3182.10	3182.10	3182.10

Interest on Loan ("IOL")

76. Regulation 26 of the 2014 Tariff Regulations with regard to IoL specifies as under:-

“(1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of decapitalisation of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of decapitalisation of such asset.

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.



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.”

77. The normative IOL has been computed as under:-

i) The gross normative loan amounting to ₹259058.14 lakh and ₹37862.79 lakh as stated above has been considered for Asset-I and Asset-II, respectively as on 1.4.2014.

ii) Cumulative repayment of ₹29419.99 lakh and ₹11010.97 lakh, considered as on 31.3.2014 has been retained as on 1.4.2014 for Asset-I and Asset-II, respectively.

iii) Depreciation allowed for the period under consideration has been considered as repayment.

iv) Average net loan is calculated as average of opening and closing.

78. The petitioner has claimed interest on normative loan considering WAROI of 12.75% for the year 2014-15, 12.244% for the year 2015-16, 12.559% for the year 2016-17, 12.553% for the year 2017-18 and 12.533% for the year 2018-19, the same has been considered subject to true-up.

79. The IOL has been worked out and allowed as follows:-



(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	259058.14	270499.64	271205.94	271205.94	271205.94
Cumulative Repayment upto Previous Year	29419.99	48685.48	68396.30	88130.05	107863.79
Net Loan-Opening	229638.15	221814.16	202809.64	183075.89	163342.15
Addition due to Additional Capitalisation	11441.50	706.30	0.00	0.00	0.00
Repayment during the year	19265.49	19710.82	19733.74	19733.74	19733.74
Net Loan-Closing	221814.16	202809.64	183075.89	163342.15	143608.40
Average Loan	225726.15	212311.90	192942.76	173209.02	153475.28
Weighted Average Rate of Interest on Loan	12.750%	12.244%	12.559%	12.553%	12.533%
Interest	28780.93	25995.89	24231.75	21742.63	19235.18

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	37862.79	37862.79	37862.79	37862.79	37862.79
Cumulative Repayment upto Previous Year	11010.97	13812.05	16613.13	19414.21	22215.29
Net Loan-Opening	26851.81	24050.73	21249.65	18448.58	15647.50
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	2801.08	2801.08	2801.08	2801.08	2801.08
Net Loan-Closing	24050.73	21249.65	18448.58	15647.50	12846.42
Average Loan	25451.27	22650.19	19849.12	17048.04	14246.96
Weighted Average Rate of Interest on Loan	12.750%	12.244%	12.559%	12.553%	12.533%
Interest	3245.13	2773.33	2492.86	2140.01	1785.58

Depreciation

80. Regulation 27 of the 2014 Tariff Regulations with regard to depreciation specifies as follows:-

"27. Depreciation:

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission



system taking into consideration the depreciation of individual units or elements thereof.

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

(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:

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:

Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(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.”

81. The petitioner has claimed depreciation considering weighted average rate of depreciation (WAROD) of 5.21%, 5.10% and 5.09% for the period 2014-15, 2015-16 and 2016-19, respectively, for Asset-I, the same has been considered



subject to minor correction and true-up. Further, for Asset-II petitioner has claimed depreciation considering WAROD of 5.18% for the tariff period 2014-19, the same has been considered, subject to true-up.

82. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Average capital cost	378255.56	386932.56	387437.06	387437.06	387437.06
Depreciable value	334967.00	342776.30	343230.35	343230.35	343230.35
Remaining depreciable value	305547.01	294090.82	274834.05	255100.30	235366.56
Rate of depreciation	5.09%	5.09%	5.09%	5.09%	5.09%
Depreciation	19265.49	19710.82	19733.74	19733.74	19733.74
Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Average capital cost	54089.69	54089.69	54089.69	54089.69	54089.69
Depreciable value	48012.92	48012.92	48012.92	48012.92	48012.92
Remaining depreciable value	37001.95	34200.87	31399.79	28598.72	25797.64
Rate of depreciation	5.18%	5.18%	5.18%	5.18%	5.18%
Depreciation	2801.08	2801.08	2801.08	2801.08	2801.08

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

83. The petitioner has submitted that Regulation 29(4)(a) of the 2014 Tariff Regulations stipulates system specific normative O&M norms for HVDC stations like Rihand-Dadri HVDC Bipole Scheme, Talcher Kolar HVDC Bipole Scheme, Balia-Bhiwadi HVDC Bipole Scheme. The petitioner has submitted that in the absence of system specific normative O&M norms for the petitioners HVDC scheme, the petitioner has used the normative O&M norms of Balia-Bhiwadi HVDC Bipole scheme to claim O&M Expenses for Asset I as the petitioner’s HVDC system and Balia Bhiwadi System is identical because of which the Commission has also done prudence check of capital cost (hard cost) of Mundra-Mohindergarh HVDC Bipole scheme by comparing it with capital cost of Balia-



Bhiwadi HVDC Bipole Scheme in order dated 18.3.2016. The petitioner has submitted that in view of the above, the following O&M Expenses are claimed:-

(₹ in lakh)

Asset-I				
2014-15	2015-16	2016-17	2017-18	2018-19
3688.37	3888.65	4100.98	4327.6	4570.4

(₹ in lakh)

Asset-II				
2014-15	2015-16	2016-17	2017-18	2018-19
1175	1214	1255	1296	1339

84. We have considered the submissions of the petitioner. As per the first proviso to clause 4(a) of Regulation 29 of the 2014 Tariff Regulations, O&M Expenses for 2014-19 tariff period for new HVDC bi-pole scheme shall be allowed on the basis of the Talcher-Kolar HVDC bi-pole scheme. The said proviso is extracted hereunder:-

“Provided that operation and maintenance expenses for new HVDC bi-pole scheme for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expense for 2000 MW, Talcher-Kolar HVDC bi-pole scheme for the respective year.”

85. Accordingly, the following O&M Expenses have been worked out for the instant assets based on the O&M norms specified for Talcher-Kolar HVDC bi-pole.

Asset-I					
Element	2014-15	2015-16	2016-17	2017-18	2018-19
Mundra Switchyard (400 KV bays) - 9 Nos (6 line bays, 2 Bus sectionalizers and 1 Bus Reactors)	542.70	560.70	579.33	598.59	618.39
Mohindergarh HVAC Switchyard (400 kV bays) - 4 Nos	241.20	249.20	257.48	266.04	274.84
HVDC Transmission Line Length-990 km	1051.38	1086.03	1121.67	1159.29	1197.90
Pole-I and II of 2500 MW of Bi-pole HVDC Stations (O&M=2500*C/2000) (₹ in lakh)	1466.25	1588.75	1722.50	1866.25	2021.25



33 kV D/C Electrode Line at Mundra Station-32 km	22.62	23.39	24.16	24.96	25.79
33 kV D/C Electrode Line at Mohindergarh Station-187 km	132.21	136.70	141.19	145.86	150.72
400 kV D/C Mohindergarh-Bhiwani (Twin Moose)-50 km	35.35	36.55	37.75	39.00	40.30
400 kV D/C Mohindergarh-Dhanonda (Quad Moose)-5 km	5.31	5.49	5.67	5.86	6.05
Bhiwani Switchyard (400 kV bays)- 2 bays	120.60	124.60	128.74	133.02	137.42
Total	3617.62	3811.40	4018.48	4238.87	4472.66
Asset-II					
Element	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV D/C Mundra-Sami (Twin Moose)-282 km	199.37	206.14	212.91	219.96	227.29
400 kV D/C Dehgam-Sami (Twin Moose)-152 km	107.46	111.11	114.76	118.56	122.51
Mundra Switchyard (400 kV bays)-4 nos.	241.20	249.20	257.48	266.04	274.84
Mundra Switchyard (220 kV ICT bays)-2 nos.	84.42	87.22	90.12	93.10	96.20
Sami Sub-station (400 kV bays)-7 nos. (4 line, 1 bus reactor, 2 FSC)	422.10	436.10	450.59	465.57	480.97
Dehgam (PG) Sub-station (400kV Bays)-2 nos.	120.60	124.60	128.74	133.02	137.42
Total	1175.16	1214.37	1254.60	1296.25	1339.23

Interest on Working Capital ("IWC")

86. Clause 1 (c) and 3 of Regulation 28 and Clause 5 of Regulation 3 of the 2014

Tariff Regulations specify as follows:-

"28. Interest on Working Capital: (1) The working capital shall cover:

(a)-----

(c) Hydro generating station including pumped storage hydro electric generating station and transmission system including communication system:

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

"(3) 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 generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later"

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



87. The components of the working capital and interest thereon admissible to the petitioner have been computed as under:-

i) **Receivables:** It has been worked out on the basis of 2 months transmission charges.

ii) **Maintenance Spares:** It has been worked out @ 15% of the O&M expenses approved above.

iii) **O&M Expenses:** It has been worked out on the basis of 1 months of O&M expenses approved above.

iv) **Rate of Interest on Working Capital:** In line with the Regulation rate of interest on working capital has been considered as 13.50% (i.e. SBI base rate of 10% as on 1.4.2014 plus 350 basis points).

88. The IWC allowed for the instant assets for the 2014-19 tariff period as determined is as under:-

(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	542.64	571.71	602.77	635.83	670.90
O & M expenses	301.47	317.62	334.87	353.24	372.72
Receivables	12622.47	12344.66	12089.25	11703.61	11317.20
Total	13466.58	13233.98	13026.90	12692.68	12360.82
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	1817.99	1786.59	1758.63	1713.51	1668.71

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	176.27	182.16	188.19	194.44	200.88
O & M expenses	97.93	101.20	104.55	108.02	111.60
Receivables	1780.13	1706.59	1665.84	1613.00	1560.13
Total	2054.34	1989.94	1958.58	1915.46	1872.62
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	277.34	268.64	264.41	258.59	252.80



Annual Transmission Charges

89. The Annual Transmission Charges allowed for the instant transmission asset for the 2014-19 tariff period is as under:-

(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	19265.49	19710.82	19733.74	19733.74	19733.74
Interest on Loan	28780.93	25995.89	24231.75	21742.63	19235.18
Return on Equity	22252.77	22763.24	22792.92	22792.92	22792.92
Interest on Working Capital	1817.99	1786.59	1758.63	1713.51	1668.71
O&M Expenses	3617.62	3811.40	4018.48	4238.87	4472.66
Total	75734.80	74067.94	72535.52	70221.68	67903.22
Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	2801.08	2801.08	2801.08	2801.08	2801.08
Interest on Loan	3245.13	2773.33	2492.86	2140.01	1785.58
Return on Equity	3182.10	3182.10	3182.10	3182.10	3182.10
Interest on Working Capital	277.34	268.64	264.41	258.59	252.80
O&M Expenses	1175.16	1214.37	1254.60	1296.25	1339.23
Total	10680.80	10239.52	9995.04	9678.02	9360.79

Note: (1) All figures are on annualised basis.

(2) All figures under each head have been rounded. The figure in total column in each year is also rounded. As such, the sum of individual items may not be equal to the arithmetic total of the column.

90. The petitioner has submitted that the claim for transmission charges and other charges is exclusive of incentive, late payment surcharge, FERV, any statutory taxes, levies, duties, cess, or any other kind of impositions etc. The same, if imposed shall be borne and additionally paid by the respondents. We have considered the submissions of the petitioner. The petitioner is entitled for late payment surcharge and FERV as per Regulations 45 and 50 respectively of the 2014 Tariff Regulations.

91. 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 Regulation 25 of the 2014 Tariff Regulations. The petitioner's prayer for under-recovery or over-recovery of annual fixed charges, on account of return on equity shall be dealt under Regulation 25(3) of the 2014 Tariff Regulations.

Filing Fee and Publication Expenses

92. The petitioner has sought reimbursement of filing fee and publication expenses paid by it. 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

93. 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.

Sharing of Transmission Charges

94. 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.



95. The transmission charges determined through this order shall be recovered through PoC mechanism in accordance with Sharing Regulations with effect from 1.10.2013. However, for calculating the incentive and target availability during 2009-14 tariff period, the relevant provision of the Tariff Regulations, 2009 in respect of HVAC and HVDC shall be kept in view. Since the tariff of Asset I has been worked out on consolidated basis, the calculation of incentive in respect of HVAC and HVDC shall be in proportion to the capital cost of HVAC and HVDC as allowed in this order.

96. This order disposes of Petition No. 146/TT/2016.

sd/-
(M.K. Iyer)
Member

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson

