

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 184/TT/2013

Coram:

Shri Gireesh B. Pradhan, Chairperson

Shri A.K. Singhal, Member

Shri A.S. Bakshi, Member

Date of Order : 18.03.2016

In the matter of:

Approval of transmission tariff for Asset-1: +/- 500 kV Mundra-Mohindergarh HVDC bipole transmission line with associated sub-stations, bays, electrode lines and associated 400 kV lines and Asset-2: 400 kV D/C Mundra-Dehgam transmission line with associated system for the tariff block 2009-14 under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009.

And in the matter of:

Adani Power Limited,
"Adani House",
Near Mithakhali Six Roads, Navarangpura,
Ahmedabad-380009

.....**Petitioner**

Vs

1. Power Grid Corporation of India Limited,
Saudamini, Plot-2, Sector-29,
Near IFFCO Chowk,
Gurgaon-122 001, Haryana
2. National Load Despatch Centre,
B-9, Qutab Industrial Area, Katwaria Sarai,
New Delhi-110 016
3. Northern Regional Load Despatch Centre,
18-A, ShaheedJ eet 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 Bhavan, Race Course,
Vadodra-390 007
7. Haryana Vidyut Prasaran Nigam Limited,
1st Floor, Shakti Bhawan, Sector-6,
Panch Kula-134 109, Haryana
8. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan, 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,
VidyutBhawan, 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, Silvasa-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, Vidyut Bhawan, Janpath,
Jyoti Nagar, Jaipur- 302 005, Rajasthan
22. Jodhpur Vidyut Vitran 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 Substation 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, UP
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 9East), 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 Amit Kapur, Advocate for APL
Ms Poonam Varma, Advocate for APL
Shri Gaurav Dudeja, Advocate for APL

For respondents : Shri M.G. Ramachandran, Advocate for HVPNL



Shri Kumar Mihir, Advocate for HVPNL
Shri Vivek Narayan Sharma, Advocate for DTL
Ms Abiha Zaidi, POSOCO-NLDC
Shri S.P. Singh, DTL

ORDER

The petitioner, Adani Power Limited, has filed the present petition for determination of tariff of :(a) Asset-1 consisting of +/- 500 kV Mundra-Mohindergarh HVDC bipole transmission line with associated sub-stations, bays, electrode lines and associated 400 kV lines; and (b) Asset-2 consisting of 400 kV D/C Mundra-Dehgam transmission line with associated system (hereinafter referred to as "transmission assets") from the date of issue of transmission licence till 31.3.2014 in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the Tariff Regulations, 2009").

Background

2. The petitioner has set up a generating station, Mundra Thermal Power Station (hereinafter "Mundra TPS") with a total capacity of 4620 MW in the Special Economic Zone at Mundra in the State of Gujarat. The generating station has four phases, namely, Phases I & II comprising Unit Nos. 1 to 4 (4x330 MW), Phase III comprising Unit Nos. 5 and 6 (2x660 MW) and Phase IV comprising Unit Nos.7 to 9 (3x660 MW). The petitioner entered into two PPAs dated 2.2.2007 and 6.2.2007 for supply of 2000 MW to Gujarat UrjaVikas Nigam Limited (GUVNL) i.e. 1000 MW from Phase I & II and 1000 MW from Phase III. The petitioner has also entered into two PPAs dated 7.8.2008 with Uttar Haryana Bijli Vidyut Nigam Ltd (UHBVNL) and



Dakshin Haryana Bijli Vidyut Nigam Ltd (DHBNL) for supply of 1424 MW (712 MW to each) from Phase IV of the generating station through Case 1 bidding. The petitioner has been selling the balance capacity on merchant basis through long term, medium term and short term open access. For evacuation of power to GUVNL under the PPAs, Gujarat Energy Transmission Corporation Ltd (GETCO) has established the transmission system at 400 kV and 220 kV voltage levels for connecting Mundra TPS to various load centres in the State of Gujarat. However, for evacuation of power under power purchase agreements with UHBNL and DHBNL, the petitioner implemented the dedicated transmission system of ± 500 kV Mundra - Mohindergarh HVDC bi-pole transmission line including associated 400 kV transmission lines. The petitioner was granted long term access for evacuation of 200 MW power to Maharashtra at Dehgam sub-station of PGCIL on 30.7.2007. The petitioner constructed 400 kV Mundra-Sami-Dehgam D/C transmission line as dedicated transmission line. Further, the petitioner was granted long term access for supply of 342 MW power to Punjab and Rajasthan in Northern Region on 17.7.2009 with connectivity at Bhiwani sub-station of PGCIL through Mundra - Mohindergarh HVDC bi-pole transmission line. For availing connectivity, the petitioner constructed the dedicated 400 kV Mohindergarh- Bhiwani transmission line. Thus, the petitioner constructed the following transmission lines for evacuation of power from Mundra TPS:

- (a) 400 kV Mundra - Sami - Dehgam D/C transmission line
- (b) ± 500 kV HVDC Mundra - Mohindergarh HVDC bi-pole transmission line
- (c) 400 kV Mohindergarh - Bhiwani transmission line

3. Since the petitioner's dedicated transmission lines as noted above were connected with multiple grids viz. inter-State transmission system (ISTS), Gujarat



intra-State transmission system (Gujarat STS) and Haryana intra-State transmission system (Haryana STS) and as such formed an integral part of the meshed network of ISTS, the petitioner filed Petition No.44/TT/2012 under Regulation 6(c) of the Central Electricity Regulatory Commission (Terms and Conditions for grant of transmission licence and other related matters) Regulations, 2009 (Transmission Licence Regulations) for grant of transmission licence for the dedicated transmission lines along with associated bays. The Commission after due examination of the power flows on these dedicated transmission lines came to the conclusion that these dedicated transmission lines constructed by the petitioner are inter-regional in nature and cannot be left un-regulated. The Commission felt it imperative to step in to regulate these transmission lines so as to ensure compliance of the regulatory framework in the overall interest of the grid. Accordingly, the Commission granted transmission licence to the petitioner in respect of the dedicated transmission lines and associated bays after following due process vide order dated 29.7.2013. The petitioner was granted transmission licence for the following assets as part of ISTS:

Transmission Lines:

- 1) Mundra-Mohindergarh (+/- 500 kV) HVDC line
- 2) Electrode line at Mundra Station
- 3) Mohindergarh-Dhanonda 400 kV D/C line
- 4) Mohindergarh-Bhiwani 400 kV D/C line
- 5) Electrode line at Mohindergarh Station, Mohindergarh
- 6) Mundra-Sami 400 kV D/C line
- 7) Sami-Dehgam 400 kV D/C line

Substations:

- 1) HVDC Terminal Station at Mundra TPS
- 2) Mundra TPS Switchyard
- 3) Sami Switching Station 400 kV
- 4) HVDC Terminal Station at Mohindergarh, Haryana
- 5) OPGW Repeater stations at Radhanpur (Gujarat), Sikar and Pali (Rajasthan)
- 6) Bhiwani (PG) Sub-station 4 Nos. bays
- 7) Dehgam (PG) Sub-station 4 Nos. bays



4. The petitioner has filed the present petition for determination of annual fixed charges of these assets from the date of licence till the end of the tariff period i.e. from 29.7.2013 till 31.3.2014. The petitioner has grouped the assets into Asset 1 consisting of the assets of Northern Region, namely, HVDC Pole-I and Mohindergarh-Bhiwani D/C Line, HVDC Pole-II and Mohindergarh-Dhanonda Transmission Line with associated sub-stations; and Asset 2 consisting of the assets of Western Region namely, 400 kV D/C Mundra-Dehgam transmission line with associated systems.

5. The petitioner has submitted that the Commission vide para 14 of the order dated 29.7.2013 had directed the petitioner to form a separate company to be incorporated in accordance with the Companies Act, 1956 and to ensure that the company is ring-fenced from other businesses of the petitioner. The petitioner is stated to have initiated steps for incorporating a separate company and the transmission assets covered under the licence shall be transferred to the new company in compliance with the directions of the Commission soon after its incorporation. The petitioner has submitted that prior to the grant of transmission licence, it was maintaining integrated books of accounts for the generation and transmission businesses and the petitioner has now identified the values of the transmission assets for which licence has been granted and has segregated the same on functional basis for the purpose of the present petition.

6. The petitioner has constructed the 400 kV D/c transmission lines, namely Mundra-Sami (282 km) and Sami Dehgam (152 km) alongwith switching station at Sami and associated bays at Mundra and Dehgam which were commissioned



on 13.7.2009. Further, the petitioner has constructed and commenced operation of the HVDC Pole I and 400 kV Mohindergarh-Bhiwani D/c line with effect from 12.7.2012. Pole II of the HVDC line has commenced operation on 9.8.2013. The petitioner is also stated to have commissioned 400 kV Mohindergarh-Dhanonda D/c line on 9.8.2013. The petitioner has submitted the gross capital cost for Asset I and Asset II as on 29.7.2013 i.e. as on the date of transmission licence. The petitioner has submitted that the actual debt and equity ratio is 69.57:30.43 which is as close as possible to the normative debt equity ratio of 70:30 and the weighted average interest rates for the loans is about 4.71% for the financial year 2013-14. The petitioner has submitted that it has made its claims for annual transmission charges as per the normative parameters of the various elements in accordance with the Tariff Regulations, 2009. The petitioner has also submitted that it may be allowed to recover the licence fee and other charges whenever imposed by any Government or local bodies or statutory authority. The petitioner has also submitted that the transmission tariff shall be paid by the beneficiaries from the date of grant of transmission licence and tariff shall be recovered on monthly basis and billing, collection and disbursement shall be governed in accordance with the provisions of Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010 as amended from time to time (Sharing Regulations). The petitioner has prayed for grant of provisional tariff in terms of Regulation 5(4) of the Tariff Regulations, 2009 pending determination of final tariff.

7. The petitioner has claimed the annual fixed charges of the transmission assets as under:-



(Rs. in Lakh)

Particulars	Asset-I	Asset-II
	2013-14 *	2013-14 *
Return on Equity	13084.00	1995.00
Depreciation	8270.00	1243.00
Interest on Loan	15118.00	2273.00
Interest on Working capital	1027.00	194.00
O & M Expenses	3820.00	1306.00
Total	41318.00	7011.00

(*Pro-rata from 29.7.2013 to 31.3.2014)

8. The petitioner has claimed the interest on working capital as under:

(Rs in lakh)

Particulars	Asset-I	Asset-II
	2013-14 *	2013-14 *
Maintenance Spares	1964.00	291.00
O & M expenses	1091.00	161.00
Receivables	8076.00	1734.00
Total	11131.00	2186.00
Rate of Interest	13.20%	13.20%
Interest on working capital	367.00	194.00

(*Pro-rata from 29.7.2013 to 31.3.2014)

9. The petitioner has served the copies of the petition on the respondents. The petitioner has carried out publication of the petition in accordance with section 64 of the Electricity Act, 2003 and the provisions of Tariff Regulations, 2009. In response to the public notice, no comments or suggestions have been received from the general public.

10. The petitioner was granted provisional tariff vide order dated 18.12.2013 under Regulation 5(4) of the Tariff Regulations, 2009 for the period from 1.10.2013 till 31.3.2014 subject to adjustment as provided under Regulation 5(3) of the Tariff Regulations, 2009. The provisional tariff was further extended till determination of final tariff.



11. The respondents, namely, Gujarat Urja Vikas Nigam Limited (GUVNL), M.P. Power Management Company Limited (MPPMCL), Jaipur Vidyut Vitran Nigam Limited (JVNL), Maharashtra State Distribution Company Limited (MSEDCL), Delhi Transco Limited (DTL) and National Load Despatch Centre (NLDC) have filed replies. The submissions of the respondents in brief are discussed as under:

(a) GUVNL in its affidavit dated 14.10.2013 has submitted that the transmission charges for the two systems to be determined by the Commission in the present petition should be allocated to and borne by the beneficiaries of the respective regions and not by all beneficiaries of the Western Region including in particular the State Utilities of Gujarat who are not utilising any part of the two transmission systems. Therefore, there is no need for Gujarat Utilities to file objections on the quantum of transmission charges claimed.

(b) MPPMCL vide its affidavit dated 26.10.2013 has submitted that both assets have been constructed by the petitioner for discharging its obligations under the PPAs with the beneficiaries of Mundra TPS i.e. 2000 MW with GUVNL and 1424 MW with Haryana Utilities. The petitioner intended to sell the balance merchant capacity through long term, medium term/short term open access which meant that the beneficiaries for the remaining assets have not been identified. Moreover, MPPMCL has no commercial arrangement/agreement with the petitioner. MPPMCL has submitted that it did not object to grant of transmission licence to the petitioner or increase in the capacity of the HVDC line by changing the configuration of conductor from



triple moose to quad conductor as they had no impact commercially or otherwise on MPPMCL. Referring to Commission's decision in para 13 of the order dated 29.7.2013 in Petition No.44/TL/2012, MPPMCL has submitted that even though a transmission line is carrying inter-State power for which inter-State transmission licence has been granted, this does not necessarily qualifies that the lines should be treated as part of ISTS and such lines continue to remain dedicated. MPPMCL has submitted that these transmission lines should not be included in the basic framework for computation of transmission charges. MPPMCL in its affidavit dated 16.11.2013 while objecting to consideration of the dedicated transmission lines as part of ISTS has conceded that available surplus capacity needs to be utilised. MPPMCL has suggested that the transmission line should be considered as a dedicated transmission line as originally envisaged with the provision that the available surplus capacity could be used by inter-State entities at the rates fixed by the Commission on the principle of fallback customers prevalent in natural gas sector.

(c) MSEDCL in its reply dated 16.11.2013 has supported the petitioner's contention regarding division of assets between licensed business and other businesses of the petitioner and has submitted that while segregating the assets, prudence check be carried out to ensure that common cost or cost not pertaining to transmission business is loaded in capitalisation of transmission assets. MSEDCL has submitted that the various elements of the annual fixed charges be allowed after carrying out prudence check. As regards the initial spares, MSEDCL has submitted that the same should be limited to the norms



as specified in the Tariff Regulations, 2009. MSEDCL has opposed the reimbursement of filing fees, licence fees and the prayer of the petitioner to allow recovery of the impact on change in interest rate due to floating rate of interest. As regards the Service Tax, MSEDCL has submitted that the same be allowed in the event the exemption is withdrawn by the appropriate authority.

(d) Delhi Transco Ltd has submitted that with effect from 1.4.2007, the responsibility of bulk power purchase and wheeling of power at inter-State level has been taken over by the respective distribution companies in Delhi and therefore, the petitioner has erroneously impleaded Delhi Transco Ltd in the array of respondents. Delhi Transco Limited has requested the Commission to discharge it from any liability and delete it from the array of respondents in the present petition.

(e) JVVNL has submitted that since Rajasthan is not a beneficiary of the transmission system, the tariff of the transmission system should not be loaded to the State. JVVNL has further submitted that the petitioner should be directed to intimate about the latest status of formation of a separate company for transmission business as directed by the Commission. JVVNL has submitted that initial spares and O&M expenses should be allowed as per the norms. JVVNL has also submitted that the petitioner has considered equity as on 31.3.2014 whereas equity as on 29.7.2013 should be considered. JVVNL has requested the petitioner to furnish the depreciation for the period 12.7.2012 to 29.7.2013 in order to know the balance of loan as on 29.7.2013.



(f) NLDC has filed a reply on behalf of WRLDC and NRLDC. NLDC has submitted that the Commission has granted the licence on 29.7.2013 and accordingly, the petitioner has claimed the transmission charges with effect from 29.7.2013. NLDC has submitted that in case of HVDC and associated lines, controlling philosophy, metering, loss treatment, etc. for a dedicated system are different from those of the ISTS. NLDC has submitted that operational modalities are to be discussed amongst all stakeholders for smooth changeover from the dedicated system to the ISTS. Moreover, transmission losses are used in scheduling and hence can only be applied prospectively. NLDC has submitted that a meeting was convened under the Chairmanship of Chairperson, CEA on 5.9.2013 where all major stakeholders namely CEA, CTU, NRPC, WRPC, NRLDC, WRLDC, Haryana SLDC, Gujarat SLDC and Adani Power Limited participated to discuss operational modalities and it was agreed that the transmission system owned by the petitioner would be used as ISTS with effect from 1.10.2013. NLDC has further submitted that as decided in the said meeting, transmission charges would be payable with effect from 1.10.2013 and the LTA for 1424 MW at Haryana periphery corresponding to LTA quantum of 1495 MW considering the losses would be effective simultaneously from 1.10.2013.

12. The petitioner has filed its rejoinders to the replies of the respondents. The submissions of the petitioner in its rejoinders are discussed as under:

(a) In response to GUVNL's submission regarding sharing of transmission charges, the petitioner has submitted that the issue was deliberated at length



during the hearing of the petition for grant of transmission licence and has been clarified by the Commission in orders dated 8.6.2013 and 29.7.2013 in Petition No.44/TL/2012. The petitioner has further submitted that the delivery point under PPAs executed by GUVNL with Adani Power Limited is the bus bar of Mundra TPS and GUVNL will not be affected so long as it uses the STU network of Gujarat for evacuation of its share from the bus bar of Mundra TPS of the petitioner.

(b) In response to the objections regarding sharing of transmission charges raised by MPPMCL, the petitioner has submitted that the Commission while granting the licence to the petitioner has held that the petitioner's transmission system is an ISTS and the transmission charges have to be shared as per the Sharing Regulations under the PoC mechanism. The petitioner has submitted that MPPMCL having not raised any objection during the proceedings for grant of transmission licence with regard to sharing of transmission charges is estopped from raising any objection at this stage and its contention is barred by res judicata. As regards MPPMCL's contention regarding change of configuration of conductors, the petitioner has submitted that the conductor configuration was discussed and approved in the 27th Meeting of Standing Committee on Transmission Planning of Northern Region and the petitioner on its own accord has not put in the transmission capacity more than that required by Adani Power for serving its obligations under the commercial contracts. As regards the contention of MPPMCL not being benefited by the petitioner's transmission system, the petitioner has submitted that in a meshed network, it is difficult to pinpoint the usage of an identified



transmission system by specific beneficiaries. Moreover, system plays different roles at different points of time i.e. sometimes it acts as a principal element carrying load and sometimes, it plays the role to provide reliability. As regards the option suggested by MPPMCL to treat the transmission assets of the petitioner as dedicated transmission line and allow use of the surplus capacity by the beneficiaries at the rate determined by the Commission, the petitioner has submitted that its transmission system has become part of ISTS with effect from 29.7.2013 and the provisions of the regulations regarding sharing of transmission charges of ISTS shall be applicable.

(c) In reply to the contention of MSEDCL regarding segregation of transmission assets, the petitioner has submitted that it has segregated the cost of only those assets which are identified as transmission assets based on the specific contracts and expenditure carried out for transmission activities and has considered the common assets as per prudent utility practices. The petitioner is stated to have submitted the Auditor's certificate certifying the capital cost incurred as on 29.7.2013. As regards the initial spares, the petitioner has submitted that initial spares for the petitioner's HVDC system are the major portion out of the total initial spares for pole 1. In view of the criticality of the system, the petitioner is stated to have discussed the requirement of spares with OEM contractor and accordingly procured the same to ensure reliability. The petitioner has submitted that since the availability of converter transformer is critical for the reliability of the system and also recommended by OEM, the petitioner has procured the converter transformer as part of the initial spares. The petitioner has submitted that the



initial spares include two converter transformers i.e. one at Mundra and another at Mohindergarh at a total cost of Rs. 50.42 crores. The petitioner has submitted that if the Commission is not inclined to allow the cost of initial spares as per actual, then the cost of converter transformer at Mundra and Mhindergarh may be considered as part of capital cost by adding Rs.50.42 crore in the capital cost claimed by the petitioner. As regards the recovery of shortfall or refund of excess Annual Fixed Charges on account of rate of return on equity due to change in the applicable MAT rate, the petitioner has submitted that it has calculated the revised MAT rate applicable for the Financial Year 2013-14 to avoid duplication of administrative efforts by the petitioner as well as beneficiaries by first calculating the annual transmission charges at MAT rate prevailing in 2008-09 and then truing up the same with the revised MAT rate applicable for 2013-14. As regards the reimbursement of licence fees and filing fees, the petitioner has submitted that it is entitled for the same as per the regulations and orders of the Commission.

(d) The petitioner in its rejoinder dated 17.11.2014 has refuted the contentions of JVVNL. With regard to the contention of JVVNL not being a beneficiary of the subject transmission system, the petitioner has submitted that in a meshed network, it is difficult to pinpoint the usage of the identified transmission system to specific beneficiaries. Moreover, under the PoC mechanism, charges are worked out based on usage of overall system and not with reference to specific system by individual beneficiaries. As regards the incorporation of a separate company for transmission business, the petitioner has submitted that though this is not a pre-condition for filing the



tariff petition, yet the petitioner has complied with the directions of the Commission by incorporating a new company in the name of Adani Transmission (Gujarat) Limited (ATGL) getting the scheme of demerger approved by Hon'ble High Court of Gujarat to transfer transmission business into ATIL from APL, and making an application before the Commission for assignment of the transmission licence from APL to ATIL. As regards the initial spares and MAT rates, the petitioner has made similar submission as in the rejoinder in case of MSEDCL which is not being repeated. As regards the O&M expenditure, the petitioner has submitted that in the absence of generic norms for HVDC Bipole system in Tariff Regulations, 2009, the petitioner has considered the O&M norms as adopted in Balia-Bhiwadi HVDC Bipole system of PGCIL in view of the similarity between the two. As regards the details of depreciation for the period between 12.7.2012 and 29.7.2013, the petitioner has submitted that the depreciation till 29.7.2013 is zero.

(e) The petitioner has not filed any rejoinder to the replies of DTL and NLDC.

Additional Information submitted by the petitioner

13. In the RoP for the hearing on 10.10.2013, the petitioner was asked to submit the details of segregation of capital expenditure for transmission lines, sub-station, building and civil works and PLCC communications pertaining to transmission assets as on CoD, and as on the date of issue of transmission licence supported by auditor's certificate, details of cumulative depreciation upto the date of transmission licence, funding of the project (including generating station) as on CoD and date of transmission licence, the basis for segregation of funding pattern between licensed



and non-licensed business, break-up of initial spares between sub-station and transmission lines. The petitioner vide its affidavit dated 1.11.2013 has submitted that the petitioner's transmission system was put to commercial use as an ISTS from the date of grant of transmission licence and accordingly, the petitioner has considered the date of grant of transmission licence as the base for considering the capital cost for the purpose of computing the tariff. As regards the cumulative depreciation upto the date of licence, the petitioner has submitted that since the commercial use of the transmission system as an ISTS is the date of grant of licence, the cumulative depreciation as on the date of licence is zero. The petitioner has further submitted that the expected date of commissioning of the petitioner's HVDC transmission system was June/July 2012 and the petitioner applied for transmission licence on 21.2.2012 anticipating that the licence would be granted by the time HVDC system would be commissioned. The petitioner has submitted that had the transmission licence been granted by July 2012, the petitioner's transmission system would have become ISTS by July 2012. The petitioner has submitted that under the circumstances, it would be just and proper to consider the date of licence as the date of COD, include all cost elements as on that date and compute tariff accordingly. The petitioner has submitted Auditor Certificates dated 30.10.2013 showing the detailed project cost incurred as on 29.7.2013 in respect of Asset 1 as Rs. 3,789.42 crores and in respect of Asset 2 as Rs. 573.28 crore. As regards the funding pattern including generation, the petitioner has submitted the information as under considering the date of licence as the date of COD:

Particulars	Amount (in crore)	% Funds
Equity	10,950	32.68
Debt	22,555	67.32
Total	33,505	100



The petitioner has submitted that keeping in view the requirement of Regulation 16 of the Tariff Regulations, 2009 prescribing the debt-equity ratio of 70:30, the petitioner has identified certain loans totaling Rs. 3,035.13 crore for allocation to transmission business in order to achieve the debt equity ratio close to the normative debt equity ratio. Based on the debt portion allocated to transmission business, the petitioner has furnished the funding as on the date of CoD as under:

Particulars	Amount (in crore)	% Funds
Debt	3035.13	69.57
Equity	1321.59	30.43
Total	4356.72	100

As regards the initial spares, the petitioner has submitted that the total expenditure on initial spares as on the date of licence in respect of Asset I is Rs.112.29 crore (Rs. 103.79 crore as on date of licence and Rs.8.50 crore after the date of licence) and in respect of Asset II, it is Rs.3.77 crore (Rs. 3.59 crore as on date of licence and Rs.0.18 crore after the date of licence). The petitioner has submitted that in view of the criticality of the system, the petitioner has procured the spares after discussion with OEM contractor in order to ensure reliability. The petitioner in its affidavit dated 27.11.2013 has submitted an Auditor's certificate regarding debt equity ratio of the assets including generation as on 31.3.2013.

14. The Commission vide its order dated 18.12.2013 granted provisional tariff to the petitioner in respect of the transmission assets covered under the licence. While granting the provisional tariff, the Commission kept open the issue of the date commercial operation of the transmission assets for the purpose tariff to be decided at the time of determination of final tariff and directed that the provisional tariff would



be applicable with effect from 1.10.2013. Relevant paras of the said order are extracted as under:

“12. We have considered the submissions made by the petitioner and the respondents. The petitioner has requested to allow transmission charges and the provisional tariff from the date of issue of transmission licence, i.e. 29.7.2013. Though the petitioner was granted transmission licence on 29.7.2013, the transmission system was put to use as an ISTS only from 1.10.2013. The decision to this effect was taken in a meeting convened by Chairperson, CEA on 5.9.2013 and the representative of the petitioner is party and signatory to the decisions taken in the meeting.

13. The petitioner was directed to furnish the cumulative depreciation and other financial information. In response, the petitioner submitted, vide affidavit dated 1.11.2013, that the commercial use of the transmission system as an ISTS is the date of licence and hence the cumulative depreciation as on the date of licence is zero. The petitioner further submitted that the cost as on the date of issue of licence has been considered for the purpose claiming tariff. The petitioner has considered the date of transmission licence as the deemed date of commercial operation and claimed the annual fixed cost on the basis of the capital cost as on the date of issue of licence. This issue of commercial operation of the subject transmission system shall be considered at the time of determination of final tariff. Further, for the purpose of determination of provisional tariff, the cumulative depreciation from the actual dates of commercial operation till the date of grant of licence, i.e. 29.7.2013 has been reduced from the capital cost. It is also noticed that the petitioner has capitalised the IDC and FERV upto the date of issue of licence. However, the petitioner has not submitted the break-up of FERV as on the date of actual date of commercial operation and as on the date of issue of licence. In the absence of the relevant information, expenditure on account of FERV has not been considered for provisional tariff.

.....

15. The provisional tariff allowed in this order shall be applicable from 1.10.2013. The billing, collection and disbursement of the transmission charges 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. The provisional transmission charges allowed in this order shall be subject to adjustment as per Regulation 5(3) of the Tariff Regulations, 2009.

16. The petitioner is directed to file the capital cost as on 1.10.2013 with a copy to the respondents by 31.1.2014.”

15. With regard to the date of commercial operation of the transmission systems, the petitioner in its affidavit dated 11.4.2014 has submitted that though the petitioner filed the application for transmission licence on 21.2.2012, on account of



uncontrollable circumstances and proceedings pending before the Commission, the petitioner was granted licence on 29.7.2013. The petitioner has submitted that though the Commission issued directions for operationalization of HVDC through order dated 28.6.2012 in IA No.19/2012, the utilisation of HVDC capacity was restricted only to 600 MW as decided in the meeting held on 5.7.2012 at NLDC and the same was increased to 900 MW, 1200 MW, 1500 MW, and 2000 MW in steps. The petitioner has submitted that on 3.5.2013, the petitioner got approval for power flow for 1500 MW through the HVDC system and could evacuate the full contracted capacity under PPAs with Haryana. The petitioner has submitted that on account of restrictions on the transfer capacity of the HVDC line, the petitioner could not evacuate 342 MW for which LTA was granted which resulted in loss of capacity charge of Rs.17.92 crore and the petitioner had to bear the penalty of Rs.5.18 crore for the year 2012-13. The petitioner has submitted that after grant of transmission licence, it got the approval for power flow upto 2000 MW and due to transmission constraints till 29.7.2013, the petitioner could not recover the proportionate transmission tariff upto Rs.260 crore apart from paying Rs.42 crore as long term access charges for 342 MW between the date of commissioning of HVDC system and date of grant of transmission licence. The petitioner has submitted that it could consider the 400 kV Mundra-Dehgam Transmission line in service as an ISTS only from the date of grant of licence. The petitioner has submitted that the date of grant of transmission licence may be considered for the purpose of capitalisation and grant of tariff. The petitioner has submitted that depreciation may be allowed from the date of licence and FERV may also be allowed to be capitalised till then. The petitioner has submitted that in the event, the capital cost is reduced by cumulative depreciation till the date of transmission licence, the rate to be considered shall be



the rate which reflects the useful life of the assets. The petitioner has submitted that considering any date other than 29.7.2013 as the date of commercial operation of the transmission assets will bring hardship to the petitioner. The petitioner has submitted that the Commission may consider 29.7.2013 as the start date for determination of transmission tariff and the applicable tariff for the period 29.7.2013 to 30.9.2013 may be merged with the tariff from 1.10.2013 to 31.3.2014 after adjusting the transmission charges payable by the petitioner for the LTAs corresponding to Haryana PPAs. The petitioner has submitted that in the provisional tariff order, the commission has not considered FERV since the break-up of FERV as on the date of actual commercial operation and as on the date of licence was not available. In this connection, the petitioner has submitted that in terms of Regulation 7 of the Tariff Regulations, 2009, FERV is an integral part of capital cost before CoD and is recovered or refunded throughout the life of the assets through tariff in terms of interest on loan and depreciation. Since the petitioner could get licence only on 29.7.2013 and started commercial operation as an ISTS since then, the petitioner has considered reference exchange rate as on 29.7.2013 for capitalising impact of FERV upto the licence date. The petitioner has also submitted the capital cost as on 30.9.2013 duly certified by the Statutory Auditor as directed by the Commission. As per the Auditor's Certificate, the capital cost of Asset 1 as on 30.9.2013 is Rs.3967.05 crore and that of Asset 2 as on 30.9.2013 is Rs.573.40 crore. The petitioner has submitted that in the event the Commission decides to consider 1.10.2013 as a reference date for determination of transmission tariff, the petitioner may be allowed unrecovered depreciation and other pre-operative expenses till the date of licence.



16. The Staff of the Commission sought certain information vide letters dated 3.4.2014 and 17.4.2014 for the purpose of carrying out prudence check of the claims of the petitioner. The petitioner vide affidavit dated 23.5.2014 has placed on record the relevant information which have been dealt with in appropriate places in this order. The petitioner was further directed to place on record the information relating to tools and tackles, towers procured under Emergency Restoration System, scope of work under the Security System etc. The petitioner has submitted the required information vide its affidavit dated 17.7.2014. In the Record of Proceedings for the hearing dated 13.11.2014, the petitioner was directed to submit certain information such as specific clauses of Regulation 9 under which different items of additional capital expenditures were claimed, Single Line Diagram and details of asset wise bays at each sub-station, segregation of cost of HVDC and AC systems, segregation of accounts of the transmission business etc. The petitioner vide its affidavit dated 5.12.2014 filed the information sought for and wherever information was not submitted, the petitioner explained the reasons for not submitting the information.

17. Learned counsel for the petitioner has filed a written submission dated 23.12.2014 to place on record the additional facts/submission for consideration of the Commission. The submissions of the learned counsel pertain to entitlement of the petitioner to claim return on equity during construction period and capitalisation of loss incurred by the petitioner due to restrictions imposed by the Systems Operator on the usage of the petitioner's transmission systems. As regards the capitalisation of interest during construction, it has been submitted that Regulation 7(1) of the Tariff Regulations, 2009 is inclusive in nature and is not an exhaustive one. Since the return on equity during the construction period is an expenditure



incurred by a developer, the developer loses interest by deploying equity elsewhere and therefore, return on equity during the construction period being an expenditure incurred by the petitioner upto the date of CoD, is a capital cost in terms of Regulation 7(1)(a) of the Tariff Regulations, 2009. Learned counsel has submitted that if the return on equity during the construction period is not included in the capital cost as per Regulation 7(1)(a) of Tariff Regulations, 2009, the Commission may consider to relax the provision or remove difficulty in exercise of its power under Tariff Regulations, 2009. Learned counsel has further submitted that total impact of revenue loss due to transmission constraints as per the indicative computation works out to around Rs.371 crore upto the date of licence which should be allowed as part of capital cost while determining transmission tariff in the petition in the interest of justice and equity.

Analysis and Decision on the issues raised in the petition

18. Before we proceed to determine the tariff of the transmission assets covered under the transmission licence granted to the petitioner, we consider it appropriate to deal with some of the issues raised by the petitioner and the respondents. These issues are as under:

- (a) The transmission charges of the transmission assets should be loaded to the identified beneficiaries of the assets and not on the respondents which do not have PPAs with APL or LTAs to the transmission systems of the petitioner.



(b) Whether the date of commercial operation of the transmission assets of the petitioner covered under the transmission licence should be the actual date of commissioning or the date of grant of transmission licence or the date of integration of the transmission systems to ISTS by the System Operator.

(c) The request of the petitioner to capitalise the Return on Equity during construction period.

(d) The request of the petitioner to capitalise the claimed losses on account of the constraints imposed by the System Operator.

Issue 1: Whether the transmission charges should be shared only by the identified beneficiaries of the transmission assets covered under the licence?

19. GUVNL has submitted that the State Utilities of Gujarat are not utilising any part of the transmission systems covered under the licence and therefore, the transmission charges should not be loaded to Gujarat Utilities. MPPMCL has submitted that it has no commercial arrangement/agreement with the petitioner. MPPMCL has submitted that it did not object to the grant of licence to the petitioner as it had no commercial impact on MPPMCL. It has been further submitted that even though licence has been granted for the transmission lines for carrying the inter-State power, that does not mean that the lines should be treated as part of ISTS and these lines could continue as dedicated lines. MPPMCL has suggested that the surplus capacity on the lines after meeting the requirement of the petitioner as originally envisaged should be utilised by other beneficiaries by paying the transmission charges as determined by the Commission. JVVNL has submitted that since Rajasthan is not a beneficiary of the transmission systems, the transmission



charges for the transmission systems should not be loaded on it. DTL has submitted that since the responsibility of bulk power purchase and wheeling of power at inter-State level has been taken over by the distribution licensees in Delhi, DTL should be discharged from any liability for payment of transmission charges. The petitioner has submitted that this issue has been dealt with by the Commission in the orders dated 8.6.2013 and 29.7.2013 in Petition No. 44/TL/2012 and the said orders having attained finality, the respondents are estopped from agitating the said issues in the petition filed for determination of transmission charges.

20. We have considered the rival contentions on the issue. With reference to the submission of DTL, it is noticed that the distribution licensees of Delhi have been impleaded as parties in this petition. Moreover, since the responsibility of bulk power purchase and wheeling of inter-State power no more rests with DTL after assignment of the PPAs by the learned Delhi Electricity Regulatory Commission in favour of the distribution licensees of Delhi, DTL will not have any liability for payment of transmission charges. As regards the contention that the transmission assets after grant of licence should continue as dedicated transmission lines, we are of the view such a contention is against the express provisions of the Transmission Licence Regulations under which transmission licence was granted to the petitioner. In this connection, Regulation 6 of the Transmission Licence Regulations is extracted as under:

“6. Eligibility for Grant of licence

No person shall be eligible for grant of licence unless it is—

- (a) selected through the process under the guidelines for competitive bidding, or
- (b) a state owned or controlled company identified as a project developer on or before 5.1.2011, or
- (c) a generating company which has established the dedicated transmission line, and intends to use such dedicated transmission line as the main transmission line and part of the inter-State transmission system.”



Thus as per Regulation 6(c) of the Transmission Licence Regulations, a generating company which has established a dedicated transmission line can seek transmission licence if it intends to use such dedicated transmission line as main transmission line and as part of inter-State transmission system. Since these requirements were fulfilled in case of the Asset 1 and Asset 2 of the petitioner, the Commission after following the due process granted transmission licence to the petitioner. All the respondents namely, GUVNL, MPPMCL and JVVNL were respondents in Petition No.44/TL/2012 and the orders dated 8.6.2013 and 29.7.2013 were passed after considering the objections filed in the said petition. Relevant paras of these orders are extracted as under:

Order dated 8.6.2013 in Petition No.44/TL/2012

“59. The respondents have urged that only the beneficiaries of Mundra TPS should be made to bear the transmission charges after grant of licence. We are not inclined to accept the plea. The transmission charges for the regional transmission network shall be shared by all concerned in accordance with the Commission’s regulations in vogue at the relevant time. It is also stated that on grant of transmission licence, the petitioner shall also bear the transmission charges for long-term access for the quantum of power to be dispatched.

Order dated 29.7.2013 in Petition No.44/TL/2013

“13. As regards prayer at (d) for consideration for inclusion in the PoC charges, it is clarified that the transmission lines on being treated as part of ISTS after grant of transmission licence shall be included in the basic network for computation of PoC charges. The tariff of the transmission system shall be determined by this Commission for which the transmission licensee is directed to file the petition in accordance with provisions of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009. After determination of the transmission charges of the transmission system, the transmission licensee shall be entitled to payment of transmission charges under the PoC method of computation. It is clarified that the transmission licensee shall bear the transmission charges corresponding to 1424 MW in terms of the PPA dated 7.8.2008 with the Haryana Utilities.”



The above decisions of the Commission have not been challenged and therefore, the matter has attained finality. Therefore, the Commission cannot revisit a settled issue in the present petition.

21. Sharing Regulations came into effect from 1.7.2011 and under the said regulations, the transmission charges of all transmission lines and sub-stations carrying inter-State power shall be pooled together and included in the Yearly Transmission Charges and apportioned among the Designated ISTS Customers (DICs) on the basis of usage which is determined through load flow studies. In a meshed network of inter-State Transmission Systems, it is not possible to pinpoint the usage of an identified transmission system to specific beneficiaries and therefore, the contention of the respondents that they are not affected by the transmission systems of the petitioner cannot be sustained. As regards the suggestions of MPPMCL that the transmission assets should continue to be used by the petitioner as dedicated transmission line as originally envisaged and surplus capacity should be used by other beneficiaries, we are of the view that such an arrangement is not envisaged under the regulations of the Commission. After a dedicated transmission line is converted into ISTS by grant of licence, it is integrated with the meshed network of the inter-State transmission system with the function of scheduling and accounting vested with the respective RLDCs. Therefore, after the grant of transmission licence, the transmission assets cannot be used in a dedicated mode for evacuation of power from the generating station of the petitioner only as contended by MPPMCL. It is clarified that under the PoC regime, the transmission charges are calculated on the basis of the usage determined through the load flow studies. If on the basis of load flow studies it transpires that the transmission assets



of the petitioner are used by the respondents at their drawal nodes, then only the respondents will be liable to pay the transmission charges.

Issue No.2: Whether the date of commercial operation of the transmission assets covered under the licence should be treated as the date of actual commissioning of the assets or from the date of grant of licence or from the date of integration in the grid as ISTS?

22. The transmission assets covered under the scope of licence were commissioned as a part of generating station of the petitioner Company in the form of dedicated transmission lines along with the associated sub-stations as per the following timeline:

Particulars	Elements	Actual COD
Asset II	400 kV D/C Mundra-Sami	13.7.2009
	400 kv D/C Sami-Dehgam along with Switching Station	13.7.2009
Asset I	HVDC Pole-I along with HVDC line	12.7.2012
	HVDC Pole-II along with HVDC line	9.10.2012
	400 kV D/C Mohindergarh-Bhiwani	12.7.2012
	400 kV D/C Mohindergarh-Dhanonda	9.8.2012

Thus, the transmission assets of the petitioner were commissioned prior to the grant of transmission licence. The petitioner has considered the date of transmission licence as the deemed date of commercial operation for the purpose of tariff determination under Tariff Regulations, 2009 and has claimed the annual fixed charges on the basis of the capital cost as on the date of issue of transmission licence. The petitioner has argued that the date of commercial operation of the transmission assets should be reckoned from the date the assets were treated as ISTS i.e. from the date of grant of transmission licence.

23. After grant of licence, a meeting was convened at NLDC under the Chairmanship of Chairperson CEA on 5.9.2013 with the participation of all major



stakeholders namely, CEA, CTU, NRPC, WRPC, NRLDC, WRLDC, Haryana SLDC, Gujarat SLDC and Adani Power Limited participated in order to discuss the operational arrangements relating to the transmission systems consequent to grant of licence. In the said meeting, it was agreed that “the change in status of transmission system from dedicated to inter-State transmission system would result in change of connectivity point of Mundra with inter-State Transmission System. Consequently, scheduling, application of transmission charges and losses, metering points and settlement would change as discussed in the succeeding paragraphs”. Accordingly, in the said meeting, all aspects such as control area jurisdiction, metering location, LTA/MTOA from Mundra TPS Stage I,II&III, transmission charges, RLDC fees and charges, reverse power relay and SPS, real time curtailment in case of tripping/congestion, computation of YTC/ATC and change of power order, and other issues like testing of HVDC bipole for reverse power flow were discussed and agreed. In para 12 of the minutes of the meeting, it has been categorically mentioned that “the above scheme of things would be put under operation prospectively from 1st October 2013 so that the philosophy is clear to all stakeholders.” As regards the transmission charges, para 3(iii) of the minutes of the meeting provided that “the transmission system charges of the APL’s inter-State Transmission System(ISTS) would be pooled and Point of Connection (PoC) charges and losses would be computed in line with Hon’ble CERC’s regulations from the date of operationalization as ISTS i.e. 1st October 2013.” It is significant to note at the cost of repetition that the representative of APL was a signatory to the minutes of the said meeting. NLDC vide its affidavit dated 4.11.2013 has brought the minutes of the meeting on record and in paras 5 and 6 of the said affidavit has submitted as under:

“5. As decided in the said meeting convened by Chairperson CEA, in the presence of members including Adani Power Ltd., transmission charges



would be payable w.e.f. 1.10.2013 and the LTA of 1424 at Haryana periphery corresponding to approved LTA quantum of 1495 MW after considering the losses, would be effective simultaneously from 01.10.2013.

6. In view of the above, it is suggested that the petitioner may be asked to modify the petition to the extent that the tariff of its transmission system, particularly HVDC and associated AC lines has to be determined w.e.f. 01.10.2013.”

24. While granting the provisional tariff to the petitioner, the Commission took into consideration the affidavit of NLDC and the minutes of the meeting under the Chairperson CEA and decided that the issue of commercial operation of the assets would be considered at the time of final determination of tariff. However, provisional transmission charges of the transmission systems were directed to be serviced through tariff with effect from 1.10.2013 as the assets were put into use as ISTS with effect from 1.10.2013. The petitioner was further directed to submit the capital cost of the transmission assets as on 1.10.2013.

25. The petitioner in its affidavit dated 11.4.2014 has placed on record the capital cost of the transmission assets as on 30.9.2013. However, the petitioner has pleaded that the COD for the purpose of determination of tariff should be taken as the date of grant of licence i.e.29.7.2013. The petitioner has submitted that the commencement of supply on HVDC line was intended at the earlier stage as the assets were ready, but the commencement of supply was prevented due to difficulties expressed by System Operator in integration of HVDC line. The petitioner approached the Commission to obtain transmission licence to address the operational difficulties of integration of HVDC line with the grid. The petitioner sought directions of the Commission in IA No 19 of 2012 for allowing operationalization of HVDC which was allowed by order dated 28.6.2012. Subsequently, POSOCO



granted permission gradually from 600 MW on 5.7.2012 to 2000 MW on 7.1.2014. Thus, the petitioner has submitted that the assets were ready but could not be put into regular service and evacuation was restricted due to the transmission constraints for the reasons not attributable to the petitioner. According to the petitioner, it could not put the HVDC line and associated system to regular service as mentioned in the definition of commercial operation date due to various operational constraints and the said assets were put to use only from the date of licence. Therefore, the date of licence should be considered as the date of regular service and the date of commercial operation for determination of tariff. As regards the recovery of transmission charges from 1.10.2013, the petitioner has not brought out any specific problem except a statement that “denial of tariff from 29.7.2013 to 1.10.2013 would amount to denial of tariff for the system usage by the beneficiaries in the later years.” In para 46 of the affidavit dated 11.4.2014, the petitioner has submitted that in the event the Commission decides 1.10.2013 as the reference date for determination of tariff, the unrecovered depreciation and pre-operative expenses till the date of licence be allowed to the petitioner.

26. The transmission assets of the petitioner have been commissioned with effect from the dates mentioned against each asset in para 22 above. These assets have been put to commercial use from these dates, though as dedicated transmission lines. The licence was granted on 29.7.2013 i.e. almost one year and in some cases, more than one year after the assets were commissioned. After the grant of licence, the dedicated assets acquired the status of ISTS. Therefore, there is a need to decide a reference date for determination of tariff of the transmission assets on their conversion to ISTS. Three dates are possible reference dates i.e. the dates of actual



commercial operation; the date of grant of transmission licence; and the date on which the assets were actually put to use as ISTS. Under the first option, the tariff may be determined by taking the capital cost as on the dates of actual commercial operation of the transmission assets, but the transmission charges shall be recoverable from the DICs from the date the assets were used as ISTS. However, there are difficulties in adopting this option. The transmission assets formed part of generating station prior to the date of licence and therefore, separate accounts for the dedicated transmission lines and associated bays were not maintained by the petitioner. Therefore, it would be difficult to carry out the prudence check of the expenditure incurred for transmission assets for the purpose of determination of tariff. In any case, the petitioner has not sought determination of transmission charges on the basis of actual dates commercial operation of the assets. Therefore, this option is ruled out. The second option is to determine the tariff by taking the date of grant of licence as the reference date. In fact, the petitioner is pleading for the same and has placed on record the capital cost and other relevant details as on that date. The limitation of this option is that on the basis of the broad agreement reached in the meeting taken by Chairperson CEA in which the petitioner participated, the transmission assets have been treated for use as ISTS with effect from 1.10.2013. Accordingly, the transmission charges are being serviced through PoC mechanism with effect from that date. Determining the tariff from 29.7.2013 would mean that the tariff for the period 29.7.2013 till 30.9.2013 will have to be recovered directly from the beneficiaries of the transmission system. The petitioner in para 38 of its affidavit dated 11.4.2013 has submitted that once the tariff is determined from 29.7.2013, the petitioner shall bear the charges for the LTA for supply of power under PPA to Haryana for the period between licence date and 1.10.2013. Further, in para 31 of



the said affidavit, the petitioner has submitted that the tariff applicable for the period 29.7.2013 to 30.9.2013 may be merged with the tariff for 1.10.2013 to 31.3.2014 after adjusting the transmission charges payable by the petitioner for the LTA corresponding to Haryana PPAs. The petitioner has an agreement with Haryana Utilities for 1424 MW and after considering the losses, it will be 1495 MW and the petitioner will pay the proportionate transmission charges for this capacity. According to the petitioner, transmission charges for about 1000 MW in respect of Mundra-Mohindergarh transmission line for the period 29.7.2013 to 30.9.2013 will have to be recovered from the DICs through the PoC mechanism during next months. In our view, the tariff for the period 29.7.2013 to 30.9.2013 cannot be recovered through PoC mechanism as the assets were not put into use as ISTS till 30.9.2013 and accordingly, transmission charges for this period were not included in the YTC. Therefore, this option is also not feasible. The third option is to determine the tariff from 1.10.2013. Though the petitioner has strongly argued against this date, the petitioner in para 46 of the affidavit dated 11.4.2014 has submitted that in the event the Commission decides 1.10.2013 as the reference date for determination of tariff, the unrecovered depreciation and pre-operative cost till the date of licence may be allowed to the petitioner. In our view, the reference date of 1.10.2013 can be taken for determination of tariff for the following reasons. Firstly, the assets were put into use as ISTS after taking into account all the requirements of the system operator like control area jurisdiction, scheduling, metering location, transmission charges and losses under PoC mechanism etc. which were decided in a meeting taken by Chairperson CEA with the attendance of all stakeholders including the representative of the petitioner. Secondly, the transmission charges will be serviced through PoC mechanism with effect from 1.10.2013 as decided in the said meeting. Thirdly,



recovery of the transmission charges from the date of grant of licence till 30.9.2013 will no more remain an issue. Fourthly, since the transmission systems of the petitioner were effectively used as dedicated transmission system between 29.7.2013 till 30.9.2013, the petitioner shall continue to recover the charges for the said period in the same manner it was recovering from the date of actual commissioning till 29.7.2013. Finally, taking 1.10.2013 as the date for determination of tariff will balance the interests of the petitioner and beneficiaries. In view of the above discussion, we decide that the deemed CoD for the purpose of determination of tariff shall be considered as 1.10.2013.

Issue No.3 The request of the petitioner to capitalise the Return on Equity during construction period.

27. This issue of capitalisation of RoE during the construction period was neither raised in the petition nor during the hearing. The learned counsel of the petitioner has raised this in the written submission filed on 23.12.2014. It has been submitted that Regulation 7 of the Tariff Regulations, 2009 is an inclusive provision and it does not prohibit the Commission to allow RoE during the construction period. It has been further urged that even otherwise, the Commission may exercise its power of relaxation or removal of difficulty to grant RoE during the construction period. Though such prayers through written submission without any pleadings in the petition or without giving opportunity to the respondents cannot be normally entertained, we intend to clarify the issue for guidance of all concerned. In none of the tariff regulations of the Commission since 2001, return on equity is allowed during the construction period. There are good reasons for doing that. The project developer will be serious in its enterprise to complete the project in time so that the project earns tariff. Allowing Return on Equity during the construction period will



make the project developer complacent as its investment is already earning return. Further, the language of Regulation 7(1)(a) of Tariff Regulations, 2009 is abundantly clear that return on equity is not admissible during the construction period. Regulation 7(1)(a) is extracted as under:

“(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.”

As per the Tariff Policy, the normative debt equity ratio is 70:30 which has also been incorporated in Tariff Regulations, 2009. Regulation 7(1)(a) provides that only in cases where equity deployed is more than the normative equity of 30%, then the equity in excess of 30% will be treated as normative loan and earn IDC thereon and the same will be capitalised as on the date of commercial operation. There is no provision that equity upto 30% will earn any return during the construction period. We also do not find any reason for exercising our power to relax or power to remove difficulty to grant relief to the petitioner in deviation of the express provisions of the regulations which is otherwise equitable and widely accepted in all segments in the industry including the power sector.

Issue No.4: The request of the petitioner to capitalise the claimed losses on account of the constraints imposed by the System Operators

28. Learned counsel for the petitioner has submitted that the petitioner suffered losses to the tune of Rs.371 crore on account of the load restriction imposed by the System Operators from the time the petitioner's transmission system was ready to be used till the date of grant of transmission licence on 29.7.2013. The learned



counsel has submitted that the petitioner inadvertently missed to include the losses incurred in the capital cost and has accordingly made the point in the written submission. We reiterate our view that such substantive prayers through written submission without any pleadings in the petition or without giving opportunity to the respondents cannot be normally entertained. However, we intend to deal with the issue as the petitioner has extensively relied on this aspect in this petition. It is an admitted fact that the transmission systems covered under the transmission licence were conceived and executed as dedicated transmission lines. When the Mundra-Mohindergarh HVDC line with a line length of more than 1000 km and with capacity of 2500 MW was executed by the petitioner, it is but natural that the System Operators will have to assess its impact on the grid when such line is integrated. Further, transmission line has a huge capacity which was envisaged to be utilised by the petitioner for merchant sale of power. Considering its possible impact on the security of the grid, the System Operators gradually permitted increase in load. Under section 10(1) of the Electricity Act, 2003, a generating company has the duty to establish, operate and maintain dedicated transmission lines in accordance with the Act or rules or regulations made thereunder. Further, the Electricity (Removal of Difficulty) (Fifth) Order, 2005 provides as under:

“A generating company or a person setting up a captive generating plant shall not be required to obtain license under the Act for establishing, operating or maintaining a dedicated transmission line if such company or person complies with the following:

- (a) Grid code and standards of grid connectivity;
- (b) Technical standards for construction of electrical lines;
- (c) System of operation of such a dedicated transmission line as per the norms of system operation of the concerned State Load Despatch Centre (SLDC) or Regional Load Despatch Centre (RLDC).



(d) Directions of concerned SLDC or RLDC regarding operation of the dedicated transmission line.”

Therefore, as per the above provisions, a generating company executing the dedicated transmission line is required to comply with the directions of RLDC regarding operation of the dedicated transmission line. Compliance with the directions of the RLDC is an operational requirement. The petitioner cannot claim that for meeting such operational requirement, it needs to be compensated because it resulted in loss of transmission charges. It is a business risk that the petitioner has taken while constructing a dedicated transmission line and the petitioner cannot claim compensation for the losses from the beneficiaries on account of the load restriction imposed by RLDC from the point of view of grid security.

Determination of Annual Transmission Charges

Capital Cost

29. Regulation 7 of the Tariff Regulations, 2009 provides for determination of capital cost of the generation or transmission projects as under:

“(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.”

30. The petitioner has submitted the details of the capital cost incurred and means of finance comprising capital cost and capital structure as on the date of licence certified by the statutory auditors vide affidavit dated 1.11.2013. The details submitted in the Auditor’s Certificate are as under:

Asset I

Particulars	Amount (Rs. in crore)
Building and Civil Works (refer note below)	203.70
PLCC Communication	25.83
Land-Free Hold (refer note below)	60.88
Land-Lease hold	10.89
Sub Station (refer note below)	2,033.36
Furniture and Fixtures	1.07
Office Equipment	0.41
Transmission Line (refer note below)	1,453.28
Total	3,789.42

Note: Land (Free hold), sub-station and transmission line include Capital Advance of Rs. 11.46 crore, Rs. 4.41 crore, Rs. 2.79 crore and Rs. 0.12 crore respectively.

Asset II

Particulars	Amount (Rs. in crore)
Building and Civil Works	11.28
PLCC Communication	0.96
Land-Free Hold	7.24
Land-Lease hold	4.01
Sub Station	145.28
Transmission Line	404.51
Total	573.28



31. The petitioner was directed vide order dated 18.12.2013 to submit the capital cost of the transmission assets as on 1.10.2013. The petitioner, vide rejoinder dated 11th April, 2014, has submitted Auditor Certificate certifying capital cost as on 30.9.2013 as under:

Asset I

Particulars	Amount (Rs. in crore)
Building and Civil Works (refer note below)	213.09
PLCC Communication	26.90
Land-Free Hold (refer note below)	60.73
Land-Lease hold	10.89
Sub Station (refer note below)	2,126.66
Furniture and Fixtures	1.07
Office Equipment	0.41
Transmission Line (refer note below)	1,527.30
Total	3,967.05

Note: Building and Civil works, Land (Free hold), sub-station and transmission line include Capital Advance of Rs. 0.77 crore, Rs. 0.12 crore, Rs. 2.79 crore and Rs. 0.02 crore respectively.

Asset II

Particulars	Amount (Rs. in crore)
Building and Civil Works	11.28
PLCC Communication	0.96
Land-Free Hold	7.24
Land-Lease hold	4.01
Sub Station	145.40
Transmission Line	404.51
Total	573.40

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.

33. The details of the capital cost claimed by the petitioner as on 1.10.2013 are as follows:-

(Rs.in lakh)	
Particulars	Cost claimed
ASSET-I	
HVAC System	
400 kV T/L (Mohindergarh-Bhiwani and Mohindergarh-Dhanonda lines)	5910.00
400 kV Sub-station/bays (At Mundra, Mohindergarh, Bhiwani and Dhanonda)	12606.00
IDC	2081.00
IEDC	1377.00
FERV	3524.00
Additions	1181.00
HVAC System-Total	26679.00
HVDC System	
HVDC Lines	98311.00
HVDC terminal stations	157075.00
IDC	29232.00
IEDC	19333.00
FERV	49494.00
Addition	16581.00
HVDC System-Total	370027.00
(HVAC+HVDC Systems)-Asset-I-Capital cost-Total	396705.00
ASSET-II	
HVAC System	
400 kV Mundra-Dehgam T/L	36272.00
400 kV Sub-station/bays (At Mundra, Sami and Dehgam)	15898.00
IDC	1614.00
IEDC	3545.00
FERV	-
Addition	12
(HVAC System)-Asset-II-Capital cost-Total	57340.00



34. In view of the above, the following capital cost has been considered as on 1.10.2013 for determination of tariff:

Particulars	Asset I	Asset II
Capital cost as on 1.10.2013 as per Auditor Certificate	396705.00	57340.00
Less :Additions from 29.7.2013 to 1.10.2013	17763.00	12.00
Capital Cost as on 1.10.2013 allowed for tariff purpose	378942.00	57328.00

35. MSEDCL has contended that while segregating the assets of licensed business from the other businesses, prudence check should be carried out to ensure that common cost or cost not pertaining to transmission business is not loaded in the capitalisation of transmission assets. The petitioner is stated to have considered the cost of those assets in the capital cost which are identified as transmission assets based on specific contracts and expenditure carried out for transmission activities and the common assets have been considered as per prudent utility practice. As regards the Feasibility Report estimates, the petitioner has submitted that the transmission assets under consideration were envisaged as part of the generation project and not as a separate project and therefore it is difficult to provide the feasibility report of estimates of the transmission assets. The petitioner has further submitted that the petitioner prepared the preliminary first estimates based on them market information and best available resources such as Balia-Bhiwadi HVDC line of Powergrid in terms of transmission capacity, HVDC voltage as well as line length and timing of the award of the project. The petitioner has also submitted that the petitioner had invited offers from Siemens, ABB and AREVA (who are the leading HVDC system specialist) through competitive bidding and based on the offers received from these companies, the offer received from Siemens was found to be



most competitive and accordingly order was placed in April, 2009 for execution of the transmission assets.

36. Based on the information placed on record by the petitioner, the capital cost of the petitioner's assets has been verified and determined by using benchmark capital cost model of the Commission. The petitioner in the Asset-I has claimed construction of 400 kV Bays at existing Bhiwani substation of Powergrid and similarly in Asset-II, the petitioner has claimed construction of 400 kV Bays at existing Dehgam substation of Powergrid. In view of this, wherever the petitioner has constructed the 400 kV bays at existing substation of Powergrid, we have considered indicative costs of Powergrid transmission system for prudence check.

37. The details of different elements claimed by the petitioner in respect of Asset-I and Asset-II and considered by the Commission to determine the capital cost are as under:

Asset-I

- i. HVDC terminals at Mundra and at Mohindergarh including AC filters and converter transformers at both the ends. Terminal equipment comprises both AC and DC equipment. The petitioner has however separated part of Assets of Mundra AC system at Mundra.
- ii. HVDC line (990 km).
- iii. Electrode lines at Mundra (32 km) and at Mohindergarh (185 km).
- iv. Mundra TPS Switchyard: Petitioner has claimed elements in two parts. 12 no 400 kV bays and a bus reactor (3x42 MVAR) in one part and 9 nos 400 kV bays and 2 nos 220 kV bays in other part. However, AC system at Mundra should be part of HVDC. As per the diagram submitted by the petitioner, 6 nos of 400 kV bays for connection to HVDC and 3 nos of 400 kV bays for bus coupler and bus reactor only are considered under Asset-1.



- v. Mohindergarh switchyard: This is considered as part of HVDC station and cost of AC switchyard included in the HVDC terminal cost. However, we have considered only 4 nos 400 kV bays for two D/C lines i.e. Mohindergarh-Bhiwani and Mohindergarh-Dhanonda at Mohindergarh end and for O&M expenses.
- vi. Bhiwani (PG Sub-station): The petitioner has claimed 4 nos. bays at Bhiwani Sub-station for one D/C line against which actual 2 nos. line bays required for 400 kV D/C line at Bhiwani S/S are considered.

Asset-II

- i. Bays at Mundra TPS switchyard : The petitioner has claimed 9 nos. of 400 kV bays and 2 nos. 220 kV bays, against which, there are only 2 nos. 400 kV line bays, 2x315 MVA ICT with associated bays at Mundra TPS Switchyard are considered.
- ii. 400 kV D/C Mundra-Sami line (282 km).
- iii. 400 kV Sami switching station- The petitioner has claimed 10 nos. of bays, against which actual 4 nos. line bays, a Bus reactor of 50 MVAR with associated bay and line reactors of 2x50 MVAR & FSC 38% is considered.
- iv. 400 kV Sami-Dehgam line-52 km
- v. Dehgam (PG) sub-station-The petitioner has claimed 4 nos. bays against which actual 2 nos. line bays required for 400 kV D/C Sami-Dehgam are considered.

38. The hard cost of 400 kV D/C transmission lines has been analysed with the benchmark capital cost based on the benchmark model specified by the Commission. It is observed that the claimed cost of 400 kV D/C Mohindergarh-Dhanonda line is exceeding the benchmark cost; however, it being a very short line, claimed cost is allowed. The petitioner's claim of capital cost in remaining transmission lines is within the benchmark capital cost as given below:-

(Rs.in lakh)

Sr. No.	Particulars	Length (in Km)	Bench mark cost including taxes	Bench mark cost submitted by the petitioner	Cost claimed including taxes
1	400 kV D/C Mundra-Sami line	282	29026.00	27628.00	36272.00



2	400 kV D/C Sami-Dehgam line	152	15600.00	14872.00	
3	400 kV D/C Mohindergarh-Bhiwani line	50	6824.00	6319.00	4672.00
4	400 kV D/C Mohindergarh-Dhanonda line	05	1090.00	1559.00	1238.00

39. In the case of capital cost of sub-stations, the petitioner in its submission dated 23.5.2014 has submitted justification based on the benchmark cost model of CERC. However, it is noted that the petitioner has incorrectly considered the benchmarking model for sub-station while justifying the capital cost of these assets. The petitioner, in all models of sub-stations has considered higher number of bays which has led to incorrect benchmark cost. The petitioner has considered one bay for each circuit breaker in one and half breaker bus scheme under the model. However, after correcting the number of bays, the model output provides as under:-

- i) Benchmark cost for 2x315 MVA ICTs, 2x400 kV line bays and one bus reactor at Mundra switching station under Asset-II works out to Rs. 5614lakh, as against the claim of Rs. 4145 lakh and as such, the amount claimed is allowed.
- ii) Benchmark cost for 4x400 kV line bays, 2 line reactors and one bus reactor at Sami Switching sub-stations and for FSC for double circuit line at Sami Switching stations works out to Rs.4200 lakh and Rs. 2957 lakh respectively against the total claim of Rs.10254 lakh, which is restricted to Rs. 7157 lakh plus land cost of Rs. 726 lakh. Thus, a total amount ofRs.7883 lakh for Sami switching station is allowed against claimed amount of Rs.10254 lakh.
- iii) The petitioner has claimed construction of 2 nos. 400 kV Bays at existing Dehgam S/S of POWERGRID. Indicative cost of POWERGRID has



been considered for cost of 2 nos. 400 kV bays, which was Rs. 900 lakh in July, 2009. As such, the cost of Rs. 900 lakh 2 nos. of bays is allowed as against the claim of Rs.1499 lakh by the petitioner.

Thus, the total cost allowed for the substations under Asset 2 is Rs. 12928 lakh against the claim of Rs.15898 lakh.

40. Similarly, the cost of substations under Asset-I has been considered as below:-

i) Benchmark cost for 9x400 kV line bays under stage-IV and stage-III works out as Rs. 3902 lakh.

ii) The petitioner has claimed construction of 2 nos. 400 kV Bays at existing Bhiwani S/S of Powergrid. Indicative cost of Powergrid has been considered for cost of 2 nos. 400 kV bays, which was Rs.1080 lakh in July, 2012. As such, the cost of 2 nos. bay allowed is Rs.1080 lakh, against the claim of Rs. 1179 lakh by the petitioner.

Thus, the total cost allowed for substations under Asset 1 allowed is Rs. 5203 lakh (i.e. Rs. 3902 lakh plus Rs.1080 lakh plus land cost of Rs. 221 lakh) against the claimed cost of Rs.12606 lakh.

41. Further, in the case of HVDC system, the petitioner has compared its HVDC system with Balia-Bhiwadi HVDC system of Powergrid. The petitioner has submitted that the capital cost of HVDC transmission line was compared on per km basis with HVDC transmission line of Balia-Bhiwadi line. The petitioner has further submitted that as its electrode line is 149 km longer than Balia-Bhiwadi electrode line, proportionate electrode line cost is adjusted in its line cost at the rate of Rs.25 lakh



per km to arrive at per km cost for HVDC transmission line. The petitioner has claimed an amount of Rs.100300 lakh as the hard cost of Mundra-Mohindergarh line against the cost of Rs.78500 lakh for Balia-Bhiwadi line (790 km) and has stated that the cost per km of its HVDC line is Rs.98 lakh per km in 2012 against the cost of Rs.103 lakh per km for Balia-Bhiwadi line and after escalating it at the rate of 5.26% from the date of COD (2010) to 2012, it would work out to be Rs. 112 lakh/km. The petitioner has claimed hard cost of Rs.159800 lakh for HVDC terminals excluding the cost of Mundra AC switch yard and has submitted that the said cost is less than the cost of HVDC Balia-Bhiwadi line which was Rs. 170500 lakh.

42. We have gone through the submission of the petitioner on the comparison of hard cost of bi-pole Mundra-Mohindergarh terminals with cost of Balia-Bhiwadi bi-pole. In our view, for a prudent comparison, hard cost on completion of the project should be examined. Mundra-Mohindergarh HVDC poles were commissioned on 12.7.2012 and 9.10.2012 respectively, whereas Balia-Bhiwadi HVDC poles were commissioned on 1.9.2010 and 1.7.2012 respectively. The petitioner in support of its claims has submitted that the price range in respect of 2000-2500 MW capacity worldwide is in the range of Rs.170000-220000 lakh, which may vary based on the type of technology used. The petitioner has also submitted the management certificate of Powergrid in respect of Pole-I and Pole-II of Balia-Bhiwadi HVDC. The total cost of sub-station (Pole-I) together with 790 km transmission line of Balia-Bhiwadi HVDC is Rs.222108 lakh including IDC and IEDC of Rs. 20205 lakh and Rs.5008 lakh respectively as per the management certificates. The cost of HVDC transmission line is Rs. 90224 lakh including IDC and IEDC and including estimated expenditure upto 31.3.2014. The total capital cost for Pole-II of HVDC Balia-Bhiwadi line on its COD 1.7.2012 is Rs. 53513 lakh including Rs. 6731 lakh IDC and IEDC



and also includes FERV gain of Rs.1107 lakh and estimated expenditure upto 31.3.2014. If pro-rata apportionment of IDC and IEDC is considered, the apportioned amount for transmission line works out to approximately around Rs.10242 lakh. Thus, the hard cost for 790 km Balia-Bhiwadi HVDC line commissioned on 1st September 2010, works out to approximately Rs. 79982 lakh, which includes all cost upto 31.3.2014. On the other hand, the petitioner has submitted the hard cost of Rs. 100291 lakh for 990 Km Mundra-Mohindergarh HVDC transmission line commissioned on 12.07.2012. The per km cost of both HVDC lines are comparable i.e. Rs. 101.11 lakh per km for the system of Powergrid as against Rs.101.30 lakh per km for system of the petitioner. In view of the above discussion, the cost of HVDC line as claimed by the petitioner is allowed.

43. Further, on an analysis, it is seen that the total cost for Pole-I and Pole-II of Balia-Bhiwadi HVDC is Rs. 185397lakh inclusive of IDC, IEDC and FERV amount of Rs. 21684 lakh. The FERV net adjustment is about Rs.1405 lakh (FERV loss of Rs. 2512 lakh in the case of Pole-I and Rs.1107 lakh gain in the case of Pole-II). As such, the approximate hard cost of Balia-Bhiwadi HVDC works out to Rs.163713lakh (Rs.185397 lakh - Rs.21684 lakh). The petitioner has claimed Rs.159753 lakh as the hard cost of HVDC terminals stations of Mundra-Mohindergarh system inclusive of the cost of 400 kV Mohindergarh HVAC switchyard. However, in case of Balia-Bhiwadi both HVAC and HVDC switchyards are part of terminal equipment, whereas, the petitioner has separately claimed HVAC switchyard at Mundra at a cost of Rs.11426 lakh (Stage-III and Stage-IV). As all the switchyards(whether AC or DC) are part of terminal equipment, the hard cost of HVDC terminal as per the claim of the petitioner works out be Rs.171179 lakh (Rs.159753 lakh+Rs.11426 lakh) against



the cost of Rs.163713 lakh of Balia-Bhiwadi system, as compared by the petitioner itself. However, as we have restricted the cost of AC switchyard at Mundra to Rs.3902 lakh, the cost of petitioner's HVDC terminals works out to be Rs.163655 lakh, which is comparable with the Powergrid's cost. In addition, the cost of Balia-Bhiwadi HVDC includes 4 spare convertor transformers against 2 spare convertor transformers in the case of the petitioner. The approximate cost of each convertor transformer is Rs.2500 lakh and if the cost of 2 convertor transformers is added in cost of petitioner's HVDC terminals, then it works out to be about Rs.168700 lakh against Rs.163700 lakh, being the cost of Balia-Bhiwadi system. Although, an exact comparison would not be possible as the time horizon for both the systems as well as the mode of execution of two projects were different. The petitioner awarded the work through turnkey basis to Siemens, whereas, in the case of Balia-Bhiwadi, one pole was executed by Siemens and other by BHEL. Mundra-Mohindergarh HVDC poles were commissioned on 12.7.2012 and 9.10.2012 respectively whereas Balia-Bhiwadi systems were commissioned on 1.9.2010 and 1.7.2012 respectively. If escalation factor of 5.26% is used to escalate the hard cost of petitioner's HVDC terminals, it works out to Rs. 176300 lakh [Rs.116900 lakh*(1.0526)*(1.0526)+Rs.46782 lakh] and as such the cost of Rs.159753 lakh claimed by the petitioner is allowed.

44. The petitioner has submitted that capital advance of Rs.1599 lakh is included in the capital cost of Asset-I. As capital advances do not form a part of the capital cost as per the Tariff Regulations, 2009, the same has not been considered.



45. In view of above, the details of capital cost of Asset I as on 1.10.2013 considered for tariff purposes in this order areas under:-

(Rs.in lakh)

Particulars (Asset I)	Capital cost claimed as on 1.10.2013	Less : Capital cost disallowed	Admissible capital cost as on 1.10.2013
Freehold Land	6088.00	1338.92	4749.08
Leasehold Land	1089.00	34.51	1054.49
Building & Civil Works	20370.00	645.51	19724.49
Furniture & Fixtures	107.00	3.39	103.61
Office Equipments	41.00	1.30	39.70
Transmission Line	145328.00	12.00	145316.00
Sub-Station	203336.00	6884.52	196451.48
PLCC	2583.00	81.85	2501.15
Total	378942.00	9002.00	369940.00

46. Elements where the capital cost has been disallowed are given as under:

(Rs.in lakh)

Particulars	Capital Cost		
	claimed	allowed	Disallowed
400 kV Sub-station/bays (At Mundra, Mohindergarh, Bhiwani and Dhanonda)	12606.00	5203.00	7403.00
Capital advance	1599.00	-	1599.00
Asset I	14205.00	5203.00	9002.00

47. The details of capital cost of Asset II as on 1.10.2013 considered for tariff purposes in this order are as under:-

(Rs.in lakh)

Asset II	Capital Cost		
Particulars	Claimed as on 1.10.2013	Disallowed*	Allowed as on 1.10.2013
Freehold Land	724.00	127.41	596.59
Leasehold Land	401.00	70.57	330.43
Building & Other Civil Works	1128.00	198.50	929.50
Furniture & Fixtures	-	0.00	0.00
Office Equipments	-	0.00	0.00
Transmission Line	40451.00	0.00	40451.00
Sub-Station Equipments	14528.00	2556.62	11971.38
PLCC	96.00	16.89	79.11
Total	57328.00	2970.00	54358.00



*Disallowed in proportion to reduction in capital cost.

48. Elements where the capital cost has been disallowed are given as under:

Particulars	claimed	allowed	Disallowed
400 kV Sub-station/bays (At Mundra, Sami and Dehgam)	15898.00	12928.00	2970.00

Treatment of IDC, IEDC and FERV

49. The petitioner has submitted the details of cumulative depreciation of Rs. 206.30 Crore of Asset I, 101.92 Crore of Asset II upto 1.10.2013, IDC and IEDC upto actual COD, vide rejoinder dated 23.5.2014. It is noted that the IDC and IEDC after actual commissioning has been charged to Profit and Loss account in their books. Accordingly, IDC and IEDC upto actual COD have been considered for the purpose of determination of capital cost. The details of IDC and IEDC submitted by the petitioner are as under:

(Rs.in lakh)			
Asset I		Asset II	
Particulars	Cost claimed	Particulars	Cost claimed
IDC	31313.00	IDC	3545.00
IEDC	20710.00	IEDC	1614.00
Total	52023.00	Total	5159.00

50. The petitioner has submitted the details of foreign exchange rate variation of Rs.53018 lakh on consolidated basis which included FERV due to retention payment, advance, Letter of Credit and ECB loan pertaining to Asset I. The exchange rate variation Rs.12617.06 lakh on retention, advance related to contractor's payment have been considered as a part of Plant and Machinery cost and balance portion has been considered as FERV due to loan. The balance amount of Rs.40400.94 lakh is on account of exchange rate of variation of loan. The petitioner has submitted that it has capitalized the FERV upto licence date i.e. 29.7.2013 complying with Accounting



Standard. As such, FERV of Rs.40400.94 lakh has been considered subject to reduction as discussed in subsequent paragraph. It is further observed that the petitioner has included FERV of Rs.4852 lakh for the payments after license date which has been considered as undischarged liabilities and reduced from the FERV. Accordingly, exchange rate variation of Rs. 35548.94 lakh pertaining to loan has been considered for the purpose of capitalization.

51. In view of disallowed capital cost including the disallowed cost of spare converter, the capital cost considered for the purpose of tariff computation, after adjusting the disallowed proportionate amount of IDC, IEDC and FERV is worked out as under:-

Asset I

Particulars	(Rs. in lakh)		
	Capital cost allowed	Less: proportionate IDC, IEDC and FERV disallowed	Capital cost allowed inclusive of IDC, IEDC and FERV
Freehold Land	4749.08	113.23	4635.85
Leasehold Land	1054.49	20.25	1034.24
Building & Civil Works	19724.49	378.84	19345.65
Furniture & Fixtures	103.61	1.99	101.62
Office Equipments	39.70	0.76	38.94
Transmission Line	145316.00	2702.82	142613.18
Sub-Station	196451.48	3781.66	192669.82
PLCC	2501.15	48.04	2453.11
Total	369940.00	7047.59	362892.41

(Rs. in lakh)

Asset-II			
Particulars	Capital cost allowed	Less: proportionate IDC, IEDC and FERV disallowed	Capital cost allowed inclusive of IDC, IEDC and FERV
Freehold Land	596.59	3.38	593.22
Leasehold Land	330.43	1.87	328.56
Building & Civil Works	929.50	5.26	924.24
Furniture & Fixtures	-	-	0.00



Office Equipments	-	-	0.00
Transmission Line	40451.00	188.59	40262.41
Sub-Station	11971.38	67.73	11903.64
PLCC	79.11	0.45	78.66
Total	54358.00	267.27	54090.73

Treatment of Initial Spares

52. The petitioner has claimed initial spares aggregate to Rs.11219.00 lakh for the combined transmission assets. The petitioner, vide submission dated 23.5.2014, has submitted the breakup of the initial spares for Asset I and II as under:

Asset I		Asset II	
HVDC Substation and Substation Equipment	9897.00*	Substation	0.00
Transmission Line	482.00	Transmission Line	377.00
Total	10379.00	Total	377.00

(*Includes cost of spare converter 5042 lakh)

53. It is noted that the initial spares for Asset-I also include cost of converter transformer each at Mundra and Mohindergarh at the cost of Rs.5042.00 lakh. The spare converter transformer is a separate transmission element. As such, spare converter has not been considered as part of initial spares for the purpose of tariff in the instant petition.

54. The cost of initial spares (excluding spare converter) of Rs.5337.00 lakh (Rs.10379.00 lakh-Rs.5042.00 lakh) for substation of Asset-I has been considered for the purpose capitalization as it is within the ceiling norms of Tariff Regulations, 2009. The petitioner has claimed the combined tariff of HVAC and HVDC system and in the cost claimed for Asset-I, both HVAC and HVDC systems are included,



though the HVAC system forms a small portion only. The ceiling limits of initial spares for HVAC and HVDC system are different as per the Tariff Regulations, 2009 and hence, initial spares for both systems have to be worked out separately. However, the petitioner has not submitted the break-up of initial spares separately for HVAC and HVDC in respect of Asset-I. Both JVVNL and MSEDCL have submitted that the initial spares be restricted to the norms specified in the regulations. We have considered the admissibility of the initial spares for both HVDC and HVAC with respect to ceiling limit of 2.5% corresponding to HVAC system. The petitioner is directed to submit the break-up of initial spares between HVDC and HVAC at the time of true up which shall be considered as per the provisions of Tariff Regulations, 2009.

55. Accordingly, the details of admissible initial spares for Asset-I is allowed as under:-

(Rs. in lakh)

Particulars	Capital Cost up to 31.3.2014	Initial Spares claimed	Capital cost admissible (upto 31.3.2014)	Proportionate initial spares	Initial Spares worked out	Excess Initial Spares claimed
Asset I						
Sub-station	235594.00	4855.00*	226868.44	4675.19	5697.26	-
Transmission Line	148006.00	482.00	144519.97	470.65	1088.53	-
Asset II						
Sub-station	16877.00	0.00	13828.32	0.00	408.31	-
Transmission Line	40451.00	377.00	40262.41	375.25	301.42	73.83

(*excluding cost of spare converter)

56. In view of disallowed initial spares as above, the capital cost considered for the purpose of tariff computation, after adjusting the disallowed initial spares is worked out as under:-



Asset I**(Rs. in lakh)**

Particulars	Capital cost allowed	Less: excess initial spares	Capital cost allowed
Freehold Land	4635.85	0.00	4635.85
Leasehold Land	1034.24	0.00	1034.24
Building & Civil Works	19345.65	0.00	19345.65
Furniture & Fixtures	101.62	0.00	101.62
Office Equipments	38.94	0.00	38.94
Transmission Line	142613.18	0.00	142613.18
Sub-Station	192669.82	0.00	192669.82
PLCC	2453.11	0.00	2453.11
Total	362892.41	0.00	362892.41

(Rs. in lakh)

Asset-II			
Particulars	Capital cost allowed	Less: excess initial spares	Capital cost allowed
Freehold Land	593.22	0.00	593.22
Leasehold Land	328.56	0.00	328.56
Building & Civil Works	924.24	0.00	924.24
Furniture & Fixtures	0.00	0.00	0.00
Office Equipments	0.00	0.00	0.00
Transmission Line	40262.41	73.83	40188.58
Sub-Station	11903.64	0.00	11903.64
PLCC	78.66	0.00	78.66
Total	54090.73	73.83	54016.90

57. The capital cost has been rationalized on various counts for the purpose of tariff calculations. The summary of the capital cost claimed and capital cost allowed for the purpose of tariff after disallowing IDC, IEDC, FERV, capital advance and undischarged liabilities together with adjustment of the excess initial spares is as follows:-

(Rs. in lakh)

S. No.	Particulars	Asset-I		
		Capital cost		
		Claimed	Allowed	Disallowed
1	Capital Cost excluding IDC & FC, FERV & Hedging cost	273902.00	266499.00	7403.00
	Additions: Upto 1.10.2013	17763.00	0.00	17763.00
	Add: Payment(LC) & Cost Variation	12617.00	12617.06	-
	Subtotal	304282.00	279116.06	25166.00



2	Add: IDC allowed upto COD	31313.00	30569.14	743.86
3	Add: IEDC allowed upto COD	20710.00	20218.02	491.98
4	Add: Loss of FERV allowed upto Licence date i.e. upto 29.7.2013	40401.00	34589.19	5811.81
5	Less : Capital Advance	-	(1599.00)	1599.00
6	Capital Cost on Cash Basis including IDC, & FERV	396705.90	362892.41	33812.65

(Rs. in lakh)

Sr. No.	Particulars	Asset-II		
		Capital cost		
		Claimed	Allowed	Disallowed
1	Capital Cost excluding IDC & FC, FERV & Hedging cost	51793.00	48823.00	2970.00
	Additions: Upto 1.10.2013	12.00	-	12.00
2	Add: IDC and IEDC allowed upto COD	5159.00	4891.73	267.27
3	Add: Loss of FERV allowed upto Licence date i.e. Upto 29.7.2013	-	-	-
4	Less : Initial Spares	377.00	301.41	75.59
5	Capital Cost on Cash Basis including IDC, & FERV	57340.00	54016.90	3324.86

Additional Capital Expenditure

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

“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:”

59. The petitioner has claimed the capital cost inclusive of additional capital expenditure of Rs.4658.00 lakh incurred during 2013-14 and the admitted capital



cost as on 1.10.2013 has been adjusted accordingly. Further, the FERV amount for payment beyond 1.10.2013 has also been considered as undischarged amount and the same has been considered as part of additional capitalisation.

60. In the case of Asset-I, the additional expenditure incurred/projected to be incurred after 1.10.2013 to 31.3.2104 is on account of Balance/Retention Payment, balance initial spare, Tools & Tackles, pending work related to civil work for Control Room & Office Building, Township/Colony at Mohindergarh, Forest Land compensation, System Enhancement Study, Emergency Restoration System and payment of Taxes and Duties. Petitioner in the submission dated 23.5.2014 and 5.12.2014 has submitted the details of additional capital expenditure for Asset-I from 1.10.2013 to 31.3.2014. The details of additional cost expenditure along with corresponding justification are extracted in the table below:

Sr No.	Particulars	Amount (Rs. Crore)	Justification
1.	System Study Mundra	3.98	This system study conducted by Adani Power relates to Asset-I (HVDC line) and other associated transmission system. The system study was necessary for up-gradation of the system and to optimize the injection of power with secure and reliable operation. The system study was also contemplated by the Commission in interim order dated 8.6.2013 passed in License Petition filed by Adani Power. Thus, the expenditure on system study was incurred to meet the requirement of reliable operation of power system in compliance with Grid Code and relevant regulations. Hence, the expenditure on System Study falls under Regulation 9 (1) (iv) of CERC Tariff Regulations, 2009.
2.	Rajasthan Entry Tax	6.25	By notification F.12 (14) FD/Tax/2006-137 dated 08.03.2006, the Government of Rajasthan has levied Entry tax on goods brought into the local area for use, consumption or sale. Such imposition of Entry tax has been challenged by no. of developers. Adani Power has also challenged the same by W.P. (c) No. 6296 of 2010 before Hon'ble Rajasthan High Court. Hon'ble



			Rajasthan High Court by Order dated 16.07.2010 stayed the levy of such entry tax. Said order of Hon'ble Rajasthan High Court has been challenged by Govt. of Rajasthan before Hon'ble Supreme Court of India by SLP No. 539 of 2011. As per order dated 12.01.2011 passed by Hon'ble Supreme Court in SLP No. 539 of 2011 and Rajasthan High Court order dated 21.01.2011 in W.P. No. 10230 of 2010, the Petitioner has deposited Entry Tax Rs. 2.56 crore in cash and Rs. 3.68 crore in the form of BG under protest. The said expenditure is in compliance of the order dated 21.01.2011 of Hon'ble Supreme Court in line with Regulation 9 (1) (i) and 9(1) (iv) of CERC Tariff Regulations, 2009.
3.	Township & Colony at Mohindergarh including other necessary infrastructure	9.27	The Petitioner has commissioned HVDC terminal station at Mohindergarh in Haryana. Reliability of the said terminal station is extremely crucial from grid point of view. Hence, it is necessary that skilled manpower is stationed at the location 24X7. The location of the terminal station being a very remote area, it is very difficult to find a proper accommodation for skilled staff to cater to the emergency manpower requirement of HVDC terminals. Hence, in order to ensure round the clock staff availability at Site or its nearby areas to mitigate emergency situation, Petitioner considered township and necessary infrastructure like control room and office building at Mohindergarh in its scope of work. The said expenditure falls within Regulation 9 (1) (ii) of CERC Tariff Regulations, 2009.
4.	Cost Escalation/ PV/Balance Payment	8.81	The Petitioner has awarded contract to Siemens for execution of the transmission assets. Siemens has raised bills for certain activities such as increase in boundary wall length at Mohindergarh, design of boundary wall, change of layout of Electrode stations etc. The price variation/ balance payment of the major package was discharged after Commercial Operation Date. Therefore, said expenditure falls within the Regulation 9 (1) (i) of CERC Tariff Regulations, 2009.
5.	Long Term Spares	8.50	Majority of spares for the HVDC assets are imported. As it is generally difficult to get the imported spares for HVDC on time, absence of such spares may affect timely maintenance / restoration of the system and would result in reduction of power flow capability or loss of redundancy. Hence, for reliable operation of the transmission system, it is important to maintain adequate quantity of spares having long lead time. Accordingly, the Petitioner has identified the long term spares based on the criticality, lead time, availability of spares, population and operation experience. Expenditure on Long Term spares falls



			within the Regulation 9(1)(iii) of CERC Tariff Regulations, 2009
6.	Tools & Plants	9.77	Emergency Restoration System (ERS) is mandatory for Transmission Licensee as per Regulation 22 of CEA (Grid Standard) Regulations, 2010 as follows: "22. <i>Emergency Restoration System:-Each transmission license shall have an arrangement for restoration of transmission lines of 400 kV and above and strategic 220 kV lines through the use of Emergency Restoration System in order to minimise the outage time of the transmission lines in case of tower failures.</i> " Hence, the same falls within the meaning of Regulation 9(1) (iv).
6.1	Emergency Restoration System	5.90	
6.2	Inventory	0.01	
6.3	Small Equipment	0.36	
6.4	Security System	3.50	
7.	TOTAL	46.58	

61. The claim of the petitioner for an amount of Rs.1364.00 lakh (Rs.977.00 lakh+Rs.1.00 lakh+Rs.36.00 lakh+Rs.350.00 lakh) being expenditure in the case of Tools and Plant Rs.977.00 lakh, InventoryRs.1.00 lakh and Small Equipment Rs.36.00 lakh is not admissible as per the Tariff Regulations, 2009 and hence not allowed. The petitioner has claimed security system of Rs 350 lakh towards electronic on line monitoring system on Mohindergarh electrode line. It is installed as a permanent solution to minimize theft of conductor in electrode line and to prevent the forced outage of the HVDC line. Hence, we have allowed the cost of the security system. The Petitioner has also claimed Emergency Restoration System (ERS) under Regulation 9(i) (iv) which is for liabilities to meet the award of arbitration or for compliance of the order or decree of a court order. However, ERS is to be provided for compliance of Regulation 22 of CEA (Grid Standard) Regulations, 2010. Hence, in the instant case we allow it as part of original scope of work. Accordingly, the petitioner's claim of additional capitalization is restricted to the Rs 3644 lakh.



62. In view of above, the details of additional capital expenditure allowed are as under:

Particulars	(Rs. in lakh)	
	claimed	Allowed
Asset-I		
Capital cost as on 1.10.2013	396705.00	362892.41
Add: additional capitalisation	-	3644.00
Add: Undischarged liabilities	-	4852.00
Subtotal		8496.00
Closing capital cost allowed	396705.00	3,71388.41
Asset-II		
Capital cost as on 1.10.2013	57340.00	54016.90
Add: additional capitalisation	-	-
Add: Undischarged liabilities	-	-
Closing capital cost allowed	57340.00	54016.90

63. The additional capital expenditure claimed by the petitioner has been considered as per Regulations 9 (1) of Tariff Regulations, 2009. The capital expenditure now considered shall be reviewed at the time of truing up, on submission of actual capital expenditures by the petitioner.

Debt- Equity Ratio

64. Regulation 12 of the Tariff Regulations, 2009 provides as under:-

“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 licensee, 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 utilised 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.”

65. In the this petition, the assets have been considered as new assets with effect from 1.10.2013 for the purpose of tariff as per Regulation 12(1) of the Tariff Regulations, 2009. The petitioner has claimed Debt: Equity ratio of 69.57:30.43. However, debt: equity in this order has been considered on the basis of normative debt: equity ratio as under:-

	Claimed as on 29.7.2013		Allowed on 1.10.2013	
Asset-I	Amount (Rs. in lakh)	% age	Amount (Rs. in lakh)	% age
Debt	265259.40	69.57	254024.69	70.00
Equity	113682.60	30.43	108867.72	30.00
Total	378942.00	100.00	362892.41	100.00
	Claimed as on 29.7.2013		Allowed on 1.10.2013	
Asset-II	Amount (Rs. in lakh)	% age	Amount (Rs. in lakh)	% age
Debt	40129.60	69.57	37811.83	70.00
Equity	17198.40	30.43	16205.07	30.00
Total	57328.00	100.00	54016.90	100.00

Return on Equity (“RoE”)

66. Regulation 15 of the Tariff Regulations, 2009 provides as overleaf:-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:



Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(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:

Rate of pre-tax return on equity = 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 financial year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations".

67. The petitioner has submitted that it may be allowed grossing up of post-tax RoE at the applicable Tax rate as per the Income Tax Act, 1961 of the year 2013-14 for the purpose of tariff. Both JVVNL and MSEDCL have submitted that grossing up should be allowed as per the regulations. We have considered the submissions. Since the assets have been commissioned in the middle of the tariff period, the applicable tax rates as per the relevant Finance Act have been adopted for the pre-tax RoE. Accordingly, MAT rate of 20.961% has been considered to work out the pre-tax RoE for the year 2013-14 on average equity base as per Regulation 15 of the Tariff Regulations, 2009. Return on Equity allowed to the petitioner are as under:



Return on Equity	(Rs. in lakh)	
	Asset-I 2013-14 (pro-rata)	Asset-II 2013-14 (pro-rata)
Opening Equity	108867.72	16205.07
Addition due to Add Cap	2548.80	0.00
Closing Equity	111416.52	16205.07
Average Equity	110142.12	16205.07
Return on Equity (Base Rate)	15.50%	15.50%
Tax rate for the year (2013-14)	20.961%	20.961%
Pre-Tax Rate of RoE	19.610%	19.61%
Return on Equity (Pre Tax)	10769.85	1584.55

Interest on Loan

68. Regulation 16 of the Tariff Regulations, 2009 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.”

69. The petitioner has claimed interest on loan under Regulation 16 of the Tariff Regulations, 2009, the petitioner’s entitlement to interest on loan has been considered on the following basis:-

(a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition;

(b) The repayment for the tariff period 2009-14 is deemed to be equal to the depreciation allowed for that period;

(c) Moratorium period availed by the transmission licensee, the repayment of the loan is considered from the first year of commercial operation of the project and to be equal to the annual depreciation allowed;

(d) Weighted average rate of interest on actual loan worked out as per (i) above is considered on the notional average loan during the year to determine the interest on loan.

70. The petitioner has submitted that it be allowed to bill and adjust impact on Interest on Loan due to change in interest on account of floating rate of interest applicable during 2009-14 period, if any, from the beneficiaries. MSEDCL has submitted that the interest on loan can be considered on the basis of actual loan at the beginning of the year. We would like to clarify that the interest on loan has been



calculated on the basis of rate prevailing as on 1.10.2013. Any change in rate of interest subsequent to that date will be considered and adjusted at the time of true up.

71. The petitioner has submitted the cumulative depreciation upto 30.9.2013 vide affidavit dated 23.5.2014 as Rs.20630 lakh in respect of Asset I and Rs.10192 lakh in respect of Asset-II. The interest on loan is to be computed on the outstanding loan, duly taking into account the schedule of repayment as per the financial package. The interest on loan has been computed based on actual repayment schedule and actual interest rate indicated by the petitioner in the petition. Accordingly, we have considered the interest on normative loan from 1.10.2013.

72. The interest on normative loan has been computed as under:-

Interest on Loan	(Rs.in lakh)	
	Asset-I 2013-14 (pro-rata)	Asset-II 2013-14 (pro-rata)
Gross Notional Loan	254024.69	37811.83
Cumulative depreciation upto 30.9.2013	20469.00	10192.00
Gross Normative loan	233555.69	27619.83
Cumulative repayment upto previous year	0.00	0.00
Net loan opening	233555.69	27619.83
Addition due to Additional Capitalization	5947.20	0.00
Repayment during the year	9355.58	1394.81
Net Loan-Closing	230147.31	26225.02
Average Loan	231851.50	26922.42
Weighted Avg. Rate of Interest	4.7112%	4.7112%
Interest	5446.52	632.45

73. The petitioner has considered same weighted average rate of interest based on actual loan portfolio considering proportionate allocation for Asset-1 and Asset-2. Detailed calculations in support of the weighted average rates of interest have been given in Annexure to this order. The petitioner has to indicate loan allocations between Asset-1 and Asset-2 at the time of true up.



Depreciation

74. Regulation 17 of the Tariff Regulations, 2009 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.”

75. The assets covered in the instant petition were actually put into service during 2009-14 period and accordingly will complete 12 years beyond the 2013-14. Thus depreciation for the tariff period has been calculated annually based on Straight Line Method and at the rates specified in Appendix-III to the Tariff Regulations, 2009 as given below:-



Gross Block	(Rs. in lakh)	
	Asset-I	Asset-II
	2013-14 (pro-rata)	2013-14 (pro-rata)
Opening Gross Block	362892.41	54016.90
Addition during 2009-14	8496.00	0.0000
Closing Gross Block	371388.41	54016.90
Average Gross Block	367140.41	54016.90
Rate of Depreciation	5.1105%	5.1785%
Depreciable Value	326226.21	48081.31
Remaining Depreciable Value	326226.21	48081.31
Depreciation	9355.58	1394.81

Operation & Maintenance Expenses (O&M Expenses)

76. The petitioner has submitted that the transmission system of the petitioner comprises of HVDC bipole system, 400 kV line and 200 kV bays etc. The petitioner has further submitted that Regulation 19 of Tariff Regulations 2009 specifies separate O&M norms for sub-stations and transmission lines but does not specify the generic norms for HVDC bipole system. According to the petitioner, its HVDC system (both poles and lines) is similar to that of Balia-Bhiwadi HVDC bipole system for which the Commission in Petition No. 315/2010 has considered the norms for Talcher-Kolar bipole HVDC system on proportionate basis for poles and norms for DC lines (bundle conductors with 4 or more sub-conductors). The petitioner is stated to have adopted the same approach for computation of the O&M expenses in respect of its HVDC system. The petitioner has submitted that at the terminal station of Mundra or Mohindergarh, the O&M charges for only those AC bays which are associated with the HVDC system have been computed in line with the approach adopted for Balia-Bhiwadi system and remaining bays have been considered as part of AC system and O&M expenses for these bays have been arrived based on the applicable norms as per the Tariff Regulation, 2009.



77. The petitioner in the instant case in Asset-I has claimed 12 nos. of 400 kV bays at Mundra Switchyard, 9 nos. of 400 kV bays at Mohindergarh Switchyard and 4 nos. of 400 kV bays at Bhiwani (PG) Substation. Similarly, in the case of Asset-II petitioner has claimed 9 nos. of 400 kV bays and 2 nos. of 220 kV bays at Mundra Switchyard, 10 nos. of bays at Sami Sub-station and 2 nos 400 KV bays at Dehgam substation. Further, the petitioner has also claimed bays for terminal equipment, AC filters and convertor transformers.

78. The Commission in the Statement of Reasons of Tariff Regulations, 2009 has clearly specified the number of bays to be allowed for transmission line and other sub-station equipment. Relevant extracts of Statement of Reasons has been quoted as under:

"23.6

In order to avoid any confusion as to how bays are to be counted, we would like to lay down following guidelines based on the current practice in this regard:

- For each AC sub-station, there will be one bay for each circuit emanating from or terminating into that sub-station. This means that in case of sub-station having one-and-half breaker scheme, tie breaker will not be counted as bay. Similarly in case of sub-station with two main and one transfer bus scheme, bus coupler and bus transfer breakers will not be counted as bays.
- Each transformer will have two bays-one for HT side and other for LT side.
- Bus reactor will have one bay
- Switchable line reactor will have one bay
- Fixed Series compensation will have one bay
- Variable Series compensation will be considered to have two bays
- Each SVC will be considered to have one bay Circuit breaker employed for bus sectionalization /extension for each bus will be counted as one bay."

79. In view of above, the O&M expenses for bays for transmission lines on both the ends and bays for ICTs, Bus Reactors and Fixed Series compensation as per SOR of Tariff Regulations, 2009 have been considered.



80. The Commission has considered 2 nos. of 400 kV bays at Bhiwani sub-station for 400 kV D/C Bhiwani-Mohindergarh transmission line. At Mohindergarh HVAC yard, the Commission has considered 4 nos 400 kV bays i.e. two each for 400 kV D/C Mohindergarh-Bhiwani line and Mohindergarh-Dhanoonda line.

81. In case of Asset-II, 2 nos. of 400 kV bays have been considered at Mundra switchyard for Mundra-Sami D/C transmission line. Further, 2 nos. of 400 kV bays associated with 2X315 MVA transformers and 2 nos. of 220 kV bays associated with 2X315MVA transformers have been considered. At Sami Sub-station, 4 nos. of 400 kV bays have been considered for Mundra-Sami and Sami-Dehgam D/C transmission lines apart from 1 no. of 400 kV bay for Bus Reactor (50MVAR) and 2 no. 400 kV bay for FSC (38% series compensation). At Dehgam Sub-station, 2 nos. of 400 kV bays have been considered for Sami-Dehgam D/C transmission line.

82. The norms for O&M expenditure for transmission lines and sub-stations for the period 2009-14 have been specified under Regulation 19 (g) of the Tariff Regulations, 2009 as under:-

Norms for AC and HVDC Lines					
Element	2009-10	2010-11	2011-12	2012-13	2013-14
Norms for Talcher-Kolar HVDC Pole Scheme (=C) (Rs. in lakh)	1699	1796	1899	2008	2122
Double Circuit (Twin & Triple Conductor) (Rs. in lakh/km)	0.627	0.663	0.701	0.741	0.783
Double Circuit (Bundled conductor with four or more sub-conductors)(=L) (Rs. in lakh/km)	0.940	0.994	1.051	1.111	1.174
Norms for Sub-station (Rs. lakh per bay)					
400 kV Bay	52.40	55.40	58.57	61.92	65.46
220 kV Bay	36.68	38.78	41.00	43.34	45.82



83. In the light of the above norms for HVDC and the norms for O&M expenses in respect of HVAC system as specified in the Tariff Regulations, 2009, O&M expenses for the assets covered in the petition have been computed as under:-

(Rs. in lakh)	
Asset-I	
Element	2013-14 (pro-rata**)
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 (O&M-L*990) (Rs. in lakh)	581.13
Pole-I and II of 2500 MW of Bi-pole HVDC Stations (O&M=2500*C/2000) (Rs. in Lakh)	1326.25
33 kV D/C Electrode Line at Mundra Station-32 km*	12.528
33 kV D/C Electrode Line at Mohindergarh Station-185km*	72.4275
400 kV D/C Mohindergarh-Bhiwani (Twin Moose)-50km	19.575
400 kV D/C Mohindergarh-Dhanonda(Quad Moose)-5km	2.935
Bhiwani Switchyard (400 kV bays)-2bays	65.46
Total	2505.80

*O&M of Electrode line at Mundra and Mohindergarh Station has been allowed in line based on the norms for Balia-Bhiwadi and Talcher-Kolar system.

**Pro-rata from 1.10.2013 to 31.3.2014.

(Rs. 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. (2 line bays and 2 ICTs)	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

84. The petitioner is entitled to claim interest on working capital as per the Tariff Regulations, 2009. The components of the working capital and interest thereon admissible to the petitioner have been computed as under:-

(i) Receivables: As per Regulation 18(1) (c) (i) of the Tariff Regulations, 2009, receivables as a component of working capital will be equivalent to two months of annual transmission charges. The petitioner has claimed receivables on the basis of two months of fixed cost claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) Maintenance spares: Regulation 18 (1) (c) (ii) of the Tariff Regulations, 2009 provides for maintenance spares @ 15% per annum of the O& M Expenses as part of the working capital from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) O & M Expenses : Regulation 18(1) (c) (iii) of the Tariff Regulations, 2009 provides for O&M Expenses for one month to be included in the working capital. The petitioner has claimed O&M Expenses for 1 month of the respective year. This has been considered in the working capital.



(iv) Rate of Interest on Working Capital: In accordance with clause (3) of Regulation 18 of the Tariff Regulations, 2009, rate of interest on working capital shall be on normative basis. As such, SBI Base rate of 9.70% as on 1.4.2013 plus 350 BPS i.e. 13.20% has been considered for the purpose of working out the interest on working capital.

85. Necessary computations in support of interest on working capital are given under:-

Particulars	(Rs. in lakh)	
	Asset-I 2013-14 (pro-rata*)	Asset-II 2013-14 (pro-rata*)
Maintenance Spares	753.80	192.89
O & M Expenses	418.78	107.16
Receivables	9622.45	1460.30
Total	10795.04	1760.36
Rate of Interest	13.20%	13.20%
Interest	710.52	115.87

(*Pro-rata from 1.10.2013 to 31.3.2014.)

Transmission charges

86. In light of the above considerations, the annual fixed charges allowed to the petitioner are as under:

Particulars	(Rs. 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

(*Pro-rata from 1.10.2013 to 31.3.2014.)



Filing Fee and the Publication Expenses

87. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. MSEDCL has submitted not to consider the prayer of the petitioner. Since filing fee and publication expenses are reimbursable as pass through during the period 2009-14, 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 Regulation 42 of the Tariff Regulations, 2009.

Licence Fee

88. The petitioner has sought reimbursement of the annual licence fee by the respondents. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42A (1) (b) of the Tariff Regulations, 2009.

Service tax

89. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is withdrawn from the negative list at any time in future. The petitioner has also submitted that any taxes and duties imposed by any statutory/ Government/Municipal authorities in relation to transmission of electricity etc. shall be allowed to be recovered from the beneficiaries. MSEDCL has submitted that since the transmission charges have been put under negative list, MSCDCL has not offer any comments. At present, service tax is leviable on transmission service and therefore, no direction can be given in respect of the service tax. As regards the prayer regarding taxes and duties imposed by statutory/Government/local authorities, the petitioner has not furnished any details. If any such tax and duties are levied and the petitioner makes



an application with appropriate details, the same shall be considered in accordance with the law.

Sharing of Transmission Charges

90. 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.

91. This order disposes of Petition No. 184/TT/2013.

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson



Sr. No	Particulars	2013-14
1	UCO Bank	
	Gross loan - Opening	413
	Cumulative repayments of Loans upto previous year	105.32
	Net loan - Opening	307.68
	Addition during the Year	0
	Repayment (s) of Loans during the year	55.76
	Net loan - Closing	251.92
	Average Loan	279.8
	Rate of Interest	11.95%
	Interest on loan	33.4361
	Loan repayment effective from	31-05-2012
2	BANK OF INDIA - FCL	
	Gross loan - Opening	757.28
	Cumulative repayments of Loans upto previous year	0
	Net loan - Opening	757.28
	Addition during the Year	0
	Repayment (s) of Loans during the year	35.66
	Net loan - Closing	721.62
	Average Loan	739.45
	Rate of Interest	4.0%
	Interest on loan	29.50
	Loan repayment effective from	28-06-2013
3	CHINA DEVELOPMENT - FCL	
	Gross loan - Opening	781.7
	Cumulative repayments of Loans upto previous year	0
	Net loan - Opening	781.7
	Addition during the Year	0
	Repayment (s) of Loans during the year	35.09
	Net loan - Closing	746.61
	Average Loan	764.16
	Rate of Interest	4.00%
	Interest on loan	30.5664
	Loan repayment effective from	31-05-2013
4	HDFC BANK LTD - FCL	
	Gross loan - Opening	32.08
	Cumulative repayments of Loans upto previous year	0
	Net loan - Opening	32.08



	Addition during the Year	0
	Repayment (s) of Loans during the year	0
	Net loan - Closing	32.08
	Average Loan	32.08
	Rate of Interest	4.00%
	Interest on loan	1.2832
	Loan repayment effective from	30-06-2012
5	UNION BANK OF INDIA - FCL	
	Gross loan - Opening	135.78
	Cumulative repayments of Loans upto previous year	2.78
	Net loan - Opening	133
	Addition during the Year	0
	Repayment (s) of Loans during the year	5.96
	Net loan - Closing	127.04
	Average Loan	130.02
	Rate of Interest	5.000%
	Interest on loan	6.501
	Loan repayment effective from	30-06-2012
6	ICICI BANK LTD - FCL	
	Gross loan - Opening	68.77
	Cumulative repayments of Loans upto previous year	0
	Net loan - Opening	68.77
	Addition during the Year	0
	Repayment (s) of Loans during the year	0
	Net loan - Closing	68.77
	Average Loan	68.77
	Rate of Interest	4.00%
	Interest on loan	3.00
	Loan repayment effective from	12-03-2015
7	ICICI BANK LTD - FCL	
	Gross loan - Opening	618.90
	Cumulative repayments of Loans upto previous year	119.48
	Net loan - Opening	499.42
	Addition during the Year	-
	Repayment (s) of Loans during the year	68.19
	Net loan - Closing	431.23
	Average Loan	465.33
	Rate of Interest	3.990%
	Interest on loan	18.57
	Loan repayment effective from	9/29/2011



8	HDFC BANK LTD - FCL	
	Gross loan - Opening	134.45
	Cumulative repayments of Loans upto previous year	2.81
	Net loan - Opening	131.64
	Addition during the Year	0
	Repayment (s) of Loans during the year	4.41
	Net loan - Closing	127.23
	Average Loan	129.44
	Rate of Interest	4%
	Interest on loan	6.00%
	Loan repayment effective from	12/17/2012
	Total Loan	
	Gross loan - Opening	2,941.96
	Cumulative repayments of Loans upto previous year	230.39
	Net loan - Opening	2,711.57
	Addition during the Year	-
	Repayment (s) of Loans during the year	205.07
	Net loan - Closing	2,506.50
	Average Loan	2,609.05
	Weighted average Rate of interest on Loans	4.71%
	Interest on loan	122.92

