

CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 363/TT/2018

Coram:

Shri P.K. Pujari, Chairperson
Dr. M. K. Iyer, Member
Shri I.S. Jha, Member

Date of Order: 17.12.2019

In the matter of

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for approval of transmission tariff from COD to 31.3.2019 for Asset-I: \pm 800 kV HVDC Biswanath Chariali-Agra Pole-I (1500 MW HVDC Terminals each at Biswanath Chariali and Agra with \pm 800 kV Hexa Lapwing Transmission Line), Asset-II: Loop In and Loop Out (LILO) of 400 kV Ranganadi-Balipara-I transmission line at Biswanath Chariali pooling station alongwith associated bays at Biswanath Chariali pooling station, Asset-III: Loop In and Loop Out (LILO) of 400 kV Ranganadi-Balipara-II transmission line at Biswanath Chariali pooling station alongwith associated bays at Biswanath Chariali pooling station, Asset-IV: 132 kV D/C Biswanath Chariali (PG)-Biswanath Chariali (AEGCL) transmission line alongwith associated bays at Biswanath Chariali (AEGCL) and Biswanath Chariali Pooling Station (PGCIL), Asset-V: 200 MVA, 400/132/33 kV ICT-I at Biswanath Chariali pooling station, Asset-VI: \pm 800 kV Biswanath Chariali-Agra HVDC POLE-II (1500 MW HVDC Terminal at Biswanath Chariali and Agra) along with Earth Electrode line and Earth Electrode Station for both Biswanath Chariali and Agra upon determination of final transmission tariff as per directive of the Commission vide order dated 12.7.2018 in Petition No. 43/RP/2017 Under "Transmission system associated with North East-Northern/Western Inter Connector-I" project for tariff 2014-19 period.

And in the matter of

Power Grid Corporation of India Limited
"Saudamini", Plot No.2,
Sector-29, Gurgaon -122 001

...Petitioner

Vs

1. Assam Electricity Grid Corporation Limited,
(Formerly Assam State Electricity Board),
Bijulee Bhawan, Paltan Bazar,
Guwahati-781 001, Assam



2. Meghalaya Energy Corporation Limited,
(Formerly Meghalaya State Electricity Board)
Short Round Road, "Lumjingshai",
Shillong-793 001, Meghalaya
3. Government of Arunachal Pradesh,
Vidyut Bhawan, Itanagar-791 111
Arunachal Pradesh
4. Power & Electricity Department,
Government of Mizoram,
Aizwal, Mizoram
5. Manipur State Electricity Distribution Company Limited,
(Formerly Electricity Department, Government of Manipur),
Electricity Complex, Patta No. 1293 Under 87 (2),
Khwai Bazar, Keishampat,
District-Imphal West, Manipur-795 001
6. Department of Power,
Government of Nagaland,
Kohima, Nagaland
7. Tripura State Electricity Corporation Limited,
Bidyut Bhawan, North Banamalipur,
Agartala, Tripura (W)-700 001, Tripura
8. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Shimla-171 004 (HP)
9. Punjab State Power Corporation Limited,
Thermal Shed T-1A, Patiala
10. Haryana Power Purchase Centre,
IInd Floor, Shakti Bhawan, Sector-6,
Panchkula (Haryana)-134 109
11. Power Development Department,
Janipura Grid Station,
Jammu (Tawi)-180 007
12. Uttar Pradesh Power Corporation Limited,
10th Floor, Shakti Bhawan Extn.,
14, Ashok Marg, Lucknow-226 001
13. Delhi Transco Limited,
Shakti Sadan, Kotla Road (Near ITO),
New Delhi



14. Chandigarh Administration,
Sector-9, Chandigarh
15. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kaswali Road,
Dehradun
16. Rajasthan Power Procurement Centre,
Vidyut Bhawan, Janpath, Jaipur
17. Ajmer Vidyut Vitran Nigam Ltd.
400 KV GSS Building,
Ajmer Road, Heerapura, Jaipur
18. Jodhpur Vidyut Vitran Nigam Ltd.,
400 KV GSS Building,
Ajmer Road, Heerapura, Jaipur
19. Jaipur Vidyut Vitran Nigam Ltd.,
400 KV GSS Building,
Ajmer Road, Heerapura, Jaipur
20. North Central Railway,
Allahabad
21. BSES Yamuna Power Limited,
Shakti Kiran Building, Karkardooma,
Delhi-110 092
22. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi
23. Tata Power Delhi Distribution Limited,
33 kV Substation Building, Hudson Lane,
Kingsway Camp, North Delhi-110 009
24. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi-110 001
25. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Rampur,
Jabalpur-482 008
26. Maharashtra State Electricity Distribution Company Limited,
Prakashgad, 4th floor,
Andheri (East), Mumbai-400 052



27. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara-390 007
 28. Electricity Department,
Government of Goa, Vidyut Bhawan,
Panaji, Near Mandvi Hotel, Goa-403 001
 29. Electricity Department,
Administration of Daman and Diu,
Daman-396 210
 30. Electricity Department,
Administration of Dadra Nagar Haveli,
U.T., Silvassa-396 230
 31. Chhattisgarh State Electricity Board,
P.O. Sunder Nagar, Dangania, Raipur
Chhattisgarh-492 013
 32. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Limited,
3/54, Press Complex, Agra-Bombay Road,
Indore-452 008
 33. Karnataka Power Transmission Corporation Limited,
(KPTCL), Kaveri Bhavan,
Bangalore-560 009
 34. Transmission Corporation of Andhra Pradesh Limited,
(APTRANSCO), Vidyut Soudha,
Hyderabad-500 082
 35. Kerala State Electricity Board (KSEB),
Vaidyuthi Bhavanam, Pattom,
Thiruvananthapuram-695 004
 36. Tamil Nadu Electricity Board (TNEB),
NPKRR Maaligai, 800, Anna Salai,
Chennai-600 002
 37. Electricity Department,
Government of Pondicherry,
Pondicherry-605 001
 38. Eastern Power Distribution Company of Andhra Pradesh Limited,
(APEPDCL) APEPDCL, P&T Colony, Seethmmadhara,
Vishakhapatam, Andhra Pradesh
 39. Southern Power Distribution Company of Andhra Pradesh Limited,
(APSPDCL), Srinivasasa Kalyana Mandapam Backside,
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Tiruchanoor Road, Kesavayana Gunta,
Tirupati-517 501, Chittoor District, Andhra Pradesh

40. Central Power Distribution Company of Andhra Pradesh Limited,
(APCPDCL), Corporate Office, Mint Compound,
Hyderabad-500 063, Andhra Pradesh
41. Northern Power Distribution Company of Andhra Pradesh Limited,
(APNPDCL), Opposite NIT Petrol Pump,
Chaitanyapuri, Kazipet,
Warangal-506 004, Andhra Pradesh
42. Bangalore Electricity Supply Company Limited (BESCOM),
Corporate Office, K.R.Circle,
Bangalore-506 001, Karanataka
43. Gulbarga Electricity Supply Company Limited (GESCOM),
Station Main Road,
Gulbarga, Karanataka
44. Hubli Electricity Supply Company Limited (HESCOM),
Navanagar, PB Road, Hubli, Karanataka
45. Mescom Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore-575 001, Karanataka
46. Chamundeswari Electricity Supply Corporation Limited (CESC),
927, L J Avenue, Ground Floor,
New Kantharaj Urs Road,
Saraswatipuram, Mysore-570 009, Karanataka
47. Telangana state PC Committee Co-ordination Committee,
TSPCC, TSTransco, R. No. 547/A Block,
Somajiguda, Khairathabad, Hyderabad-500 082,
Andhra Pradesh
48. Andhra Pradesh Power Co-ordination Committee
Room No. 547, 5th Floor, Block-A,
Vidyut Soudha, Somajiguda, Khairathabad,
Hyderabad-500 082, Andhra Pradesh
49. Bihar State Electricity Board,
Vidyut Bhawan, Bailey Road,
Patna-800 001
50. West Bengal State Electricity Distribution Company Limited,
Bidyut Bhawan, Bidhan Nagar,
Block DJ, Sector-II, Salt Lake City,
Kolkata-700 091



51. Grid Corporation of Orissa Limited,
Shahid Nagar,
Bhubaneswar-751 007
52. Damodar Valley Corporation,
DVC Tower, Maniktala
Civil Centre, VIP Road,
Kolkata-700 054
53. Power Department,
Govt. of Sikkim, Gangtok-737 101
54. Jharkhand State Electricity Board,
In front of Main Secretariat,
Doranda, Ranchi-834 002
55. North Bihar Power Distribution Company Limited,
Vidyut Bhawan, Bailey Road,
Patna, Bihar-800 001
56. South Bihar Power Distribution Company Limited,
Vidyut Bhawan, Bailey Road,
Patna, Bihar-800 001
57. Tata Steel Limited,
Generation Office (W-175),
Jamshedpur
58. Maithan Power Limited,
MA-5, Gogna Colony,
Maithan Dam Post Office,
District Dhanbad-828 207, Jharkhand
59. IND Barath Energy (Utkal) Limited,
Plot No. 30-A, Road No. 1,
Film Nagar, Jubilee Hills,
Hyderabad-500 033, Andhra Pradesh
60. AD Hydro Power Limited,
Bhilwara Towers, A-12, Sector-1,
Noida-201 301, Uttar Pradesh
61. Lanco Budhil Power Private Limited,
Plot No. 397, Udyog Vihar, Phase-III,
Gurgaon, Haryana
62. Himachal Sorang Power Private Limited,
D-7, Sector-1, Lane-1, 2nd Floor,
New Shimla, Shimla-171 009, Himachal Pradesh



63. MB Power (Madhya Pradesh) Limited (MBPMPL),
239, Okhla Industrial area, Phase-III,
New Delhi-110 020
64. Himachal Baspa Power Company Limited (HBPCL),
Karcham Wangtoo HEP, Sholtu Colony,
PO: Tapri, District Kinnaur-172 104,
Himachal Pradesh
65. Jindal Power Limited,
6th Floor, MTNL Building,
8, Bhikaji Cama Place, New Delhi-110 066
66. KSK Mahanadi Power Company Limited,
8-2-293/82/A/431/A, Road No. 22, Jubilee Hills
Hyderabad, Andhra Pradesh-500 033
67. PTC India Limited,
2nd Floor, NBCC Tower, 15, Bhikaji Cama Place,
New Delhi-110 066
68. IL&FS Tamil Nadu Power Company Limited,
C. Pudhupettai Post, Parangipettai (Via),
Chidambaram (TK), Cuddalore-608 502,
Tamil Nadu
69. Adani Power Limited,
10B, Sambhav Press Building,
Judges Bungalow Road, Badakdev,
Ahmedabad-380 015
70. Torrent Power Limited,
Naranpura Zonal Office,
Sola Road, Ahmedabad-380 013
71. Heavy Water Board,
Vikram Sarabhai Bhavan,
5th Floor, Anushaktinagar,
Mumbai-400 094
72. ACB India Limited,
7th Floor, Corporate Tower,
Ambience Mall, NH-8,
Gurgaon-122 001, Haryana
73. Emco Energy Limited,
Plot No.-F-5, Road No.-28,
Wagle Industrial Area, Thane,
Mumbai-400 604



74. Spectrum Coal and Power Limited,
7th Floor, Corporate Tower,
Ambience Mall, NH-8, Gurgaon-122 001,
Haryana
75. BARC,
TRP, Post-Ghivali, District-Palghar,
Barc Plant Site, District-Palghar-401 505,
Maharashtra
76. Bharat Aluminium Company Limited,
Captive Power Plant, Balconagar,
Korba-495 684
77. Dhariwal Infrastructure Limited,
C-6, Tadali Growth Centre, M.I.D.C.T,
District Chandrapur, Maharashtra-442 406
78. DB Power Limited,
Opposite Dena Bank, C-31, G-Block,
3rd Floor, Naman Corporate Link,
Bandra-Kurla Complex, Bandra (East),
Mumbai-400 051, Maharashtra
79. Neepco,
15, NBCC Tower,
Bhikaji Cama Place,
New Delhi
80. NHPC Limited,
NHPC Office Complex, Sector-33,
Faridabad
81. NTPC Limited,
Core-7, Scope Complex,
New Delhi

.... Respondents

For Petitioner : Shri S. K. Venkatesan, PGCIL
Shri Zafrul Hasan, PGCIL
Shri Vivek Kumar Singh, PGCIL
Shri S. S. Raju, PGCIL

For Respondents : Shri R.B. Sharma, Advocate, BRPL and BSP(H)CL
Shri Mohit Mudgal, Advocate BRPL and BSP(H)CL



ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. ("the Petitioner") for approval of transmission tariff of Asset-I: \pm 800 kV HVDC Biswanath Chariali-Agra Pole-I (1500 MW HVDC Terminals each at Biswanath Chariali and Agra with \pm 800 kV Hexa Lapwing Transmission Line), Asset-II: Loop In and Loop Out (LILO) of 400 kV Ranganadi-Balipara-I transmission line at Biswanath Chariali Pooling Station alongwith associated bays at Biswanath Chariali Pooling Station, Asset-III: Loop In and Loop Out (LILO) of 400 kV Ranganadi-Balipara-II transmission line at Biswanath Chariali Pooling Station alongwith associated bays at Biswanath Chariali Pooling Station, Asset-IV: 132 kV D/C Biswanath Chariali (PG)-Biswanath Chariali (AEGCL) transmission line alongwith associated bays at Biswanath Chariali (AEGCL) and Biswanath Chariali Pooling Station (PGCIL), Asset-V: 200 MVA, 400/132/33 kV ICT-I at Biswanath Chariali Pooling Station, Asset-VI: \pm 800 kV Biswanath Chariali-Agra HVDC Pole-II (1500 MW HVDC Terminal at Biswanath Chariali and Agra) along with Earth Electrode line and Earth Electrode Station for both Biswanath Chariali and Agra (hereinafter referred to as "transmission asset") under "Transmission system associated with North East-Northern/Western Inter Connector-I" (hereinafter referred to as "transmission project") for 2014-19 tariff period from the date of commercial operation of the assets to 31.3.2019 under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as the "2014 Tariff Regulations").

2. The Petitioner has made the following prayers.

"1) Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition, as per Para: 18.3 above.

2) Admit the capital cost as claimed in the petition and approve the Additional Capitalization incurred/ projected to be incurred after cut-off date.



3) Tariff may be allowed on the estimated completion cost. The justification and details given for IDC details pertaining to foreign loans may be considered and admitted and the entire cost claimed in the instant Petition may be considered for tariff calculation purpose. RCE has already been submitted and taken on record by Hon'ble Commission in Petition 67/TT/2015 and 184/TT/2016 itself.

4) Allow the IEDC as per the justification given in the Petition.

5) Allow the Initial Spares for all the assets covered under instant petition as a whole.

6) Allow the Petitioner to approach Hon'ble Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike, if any, during period 2014-19.

7) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges on account of Return on Equity due to change in applicable Minimum Alternate/ Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided under clause: 25 of the Tariff Regulations, 2014.

8) Allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents in terms of Regulation: 52 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

9) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2014-19 period, if any, from the respondents.

10) Allow the Petitioner to bill and recover Service Tax/GST on Transmission Charges separately from the respondents, if at any time Service Tax/GST on transmission is withdrawn from negative list at any time in future. Further, any taxes and duties including cess etc. imposed by any statutory/ Govt./ municipal authorities shall be allowed to be recovered from the beneficiaries.

and pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice.”

3. The Investment Approval (IA) for instant project was accorded in the 219th meeting of the Board of Directors of the Petitioner's company held on 24.2.2009 and the same was conveyed vide letter dated 27.2.2019. As per the said IA, the estimated cost of the project, based on 2nd Quarter 2011 price level, was ₹1113019 lakh (including IDC of ₹106605 lakh). The Petitioner, vide affidavit dated 18.12.2015, has submitted that the Revised Cost Estimate-I (RCE-I) of the project was approved in the 323rd meeting of its Board of Directors held on 30.11.2015 and it is ₹1376271 lakh (including IDC of ₹174732



lakh) at April 2015 price level. Further, the Petitioner, vide affidavit dated 16.4.2019, has submitted that Revised Cost Estimate-II (RCE-II) of the project was approved in the 363rd meeting of its Board of Directors held on 7.3.2019, according to which it is ₹1471910 lakh (including IDC of ₹176395 lakh) at March, 2018 price level.

4. The scope of work covered in the instant transmission project is as follows:-

Transmission Lines:

Part-A: North East-Northern/Western Interconnector-I

- (i) Biswanath Chariali-Agra \pm 800 kV, 6000 MW HVDC Bipole line
- (ii) Balipara-Biswanath Chariali 400 kV D/C line
- (iii) LILO of Ranganadi-Balipara 400 kV line at Biswanath Chariali (Pooling Point)
- (iv) Biswanath Chariali-Biswanath Chariali (AEGCL) 132 kV D/C line

Part-B: Transmission System for immediate evacuation of power from Kameng HEP

- (i) Kameng-Balipara 400 kV D/C line
- (ii) Balipara-Bongaigaon 400 kV D/C (Quad conductor) with 30% Fixed Series Compensation at Balipara end

Part-C: Transmission System for immediate evacuation of power from Lower Subansiri HEP

- (i) Lower Subansiri-Biswanath Chariali (Pooling Point)-2 nos. 400 kV D/C lines with twin Lapwing conductor

Sub-station:

Part-A: North East-Northern/Western Interconnector-I

- (i) Establishment of 400/132 kV Pooling Station at Biswanath Chariali with 2x200 MVA, 400/132/33 kV Transformers along with associated line bays
- (ii) HVDC rectifier module of 3000 MW at Biswanath Chariali and inverter module of 3000 MW capacity at Agra
- (iii) Augmentation of 400 kV Agra substations by 4x105 MVA, 400/220/33 kV transformer along with associated bays



- (iv) Extension of 400 kV line bays at Balipara Sub-station
- (v) Extension of 132 kV line bays at Biswanath Chariali (AEGCL)

Part-B: Transmission System for immediate evacuation of power from Kameng HEP includes

- (i) 2nd 315 MVA, 400/220/33 kV ICT at MISA
- (ii) Extension of 400 kV line Bays at Bongaigaon and Balipara Sub-stations

Part-C: Transmission System for immediate evacuation of power from Lower Subansiri HEP includes

- (i) Extension of 400 kV line bays at Biswanath Chariali Pooling Sub-station

Reactive Compensation

<u>Sub-station</u>	<u>Bus Reactor</u>
1. Biswanath Chariali	2x80 MVAR
2. Bongaigaon	1x80 MVAR
3. Balipara	1x80 MVAR
4. Lower Subansiri	1x380 MVAR*
5. Kameng	1x80 MVAR*

* These reactors would be a part of generation switchyard

A. Line reactors

Srl. No.	Name of Line	Line Reactor
1	L. Subansiri – Biswanath Chariyali 400 kV 2xD/C line	2x63 MVAR* at Biswanath Chariyali end on each ckt (total 4 nos. of reactors out of which 2 nos. of reactors are being utilized as Bus Reactors)”
2.	Balipara-Bongaigaon 400 kV D/C line (Quad Moose)	1x63 MVAR at both end on each circuit. (Total 4 nos. of reactors)
3.	Balipara-Biswanath Chariyali 400 kV D/C line resulting from LILO of Ranganadi-Balipara 400 kV D/C line at Biswanath Chariyali	1x50 MVAR Existing Fixed line reactor in each circuit at Balipara end to be made switchable at the present location itself
4.	Agra-Sikar 400 kV D/C line	2x80 MVAR line reactors in place of 2x50 MVAR existing line reactors at Agra end.##

*Switchable line reactor

as agreed during 6th NER Standing Committee Meeting held on 3.10.2016.



As agreed during 33rd SCM of NR held on 23.12.2013.

5. The details of assets covered in the instant transmission project are as under:-

Asset	Description	Actual COD
Asset-I	± 800 kV HVDC Biswanath Chariali-Agra Pole-I (1500 MW HVDC Terminals at Biswanath Chariali and Agra each along with the ± 800 kV Hexa Lapwing Transmission Line)	1.11.2015
Asset-II	Loop In and Loop Out (LILO) of 400 kV Ranganadi-Balipara-I transmission line at Biswanath Chariali PS alongwith associated bays at Biswanath Chariali PS	28.10.2015
Asset-III	Loop In and Loop Out (LILO) of 400 kV Ranganadi-Balipara-II transmission line at Biswanath Chariali PS alongwith associated bays at Biswanath Chariali PS	27.10.2015
Asset-IV	132 kV D/C BNC (PG)-BNC (AEGCL) transmission line alongwith associated bays at BNC (AEGCL) and BNC PS (PGCIL)	1.10.2015
Asset-V	200 MVA, 400/132/33 kV ICT-I at Biswanath Chariali PS	19.12.2015
Asset-VI	±800 kV Biswanath Chariali-Agra HVDC Pole-II (1500 MW HVDC Terminal at Biswanath Chariali and Agra) along with Earth Electrode line and Earth Electrode Station for both BNC and Agra	2.9.2016

Background

6. The Petitioner initially filed Petition No. 67/TT/2015 for determination of transmission tariff for Assets-I to V. The Commission, in order dated 8.1.2016 in Petition No.67/TT/2017 observed that the subject transmission assets are of strategic and national importance and recognizing the huge cost of the instant transmission project, directed the Petitioner to approach the Monitoring Committee of the PSDF and the Ministry of Power for one time grant to cover the cost of the high valued assets. The Commission also granted AFC for Assets-I to V vide order dated 8.1.2016 in Petition No.67/TT/2017 under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC computation which was later revised vide order dated 3.3.2016. The relevant portion of the Commission's order dated 8.1.2016 is extracted hereunder.



“27. The Commission agrees with POSOCO that the usefulness and importance of the subject transmission assets should not be seen in the narrow prism of its immediate utilization during the initial years but needs to be assessed over the entire life cycle of the assets which will carry the hydro power from the huge potential in North East for the benefit by the entire country. POSOCO has rightly pointed out that this link would provide the flexibility in power transfer, function as a pseudo phase-shifter and help in mitigating oscillations in inter-area mode and above all, the frequency controllers at BNC would help in operation of NER system, if it were to get islanded due to any reasons. Further, this bi-directional HVDC technology would enable optimal hydrothermal mix and successful integration of renewable energy resources of the country due to its connectivity with the hydro surplus North Eastern Region on one end and balance part of the country through National Grid. Strong interconnection through AC links between all the regions of National Grid would enable exchange of power between North–East Region and rest of the country. Moreover, this high capacity interconnection between North–East Region comprising of huge hydro potential would go a long way for integration of large renewable energy resources being developed in different parts of the country. Due to direct interconnection, hydro generation can support the variability and intermittent nature of renewable generation. Thus, this vital link is a flagship endeavor of the Indian Power Sector which will benefit the entire country.

28. Since the transmission assets are of strategic and national importance whose benefits shall be derived by the entire country, we are of the view that the charges for the HVDC assets covered in the present petition should be shared by all the regions of the Country.

29. The Commission is conscious of the fact that the capital investments in the assets of the subject transmission systems are huge and the entire assets may not be utilised to their intended level on account of the delay in commissioning of planned hydro potential in NER. The Commission feels that there is a strong necessity to share the burden of capital cost of transmission scheme by way of assistance from the Power System Development Fund (PSDF) by way of one time grant. Accordingly, we direct the petitioner to take up the matter with the Monitoring Committee of the PSDF for assistance in the form of one time grant from the PSDF and with Ministry of Power for grant to reduce the burden of transmission charges on the DICs. We also request Ministry of Power, Government of India to arrange for funds from the PSDF as well as Government grant, considering the subject transmission systems as assets of strategic and national importance, keeping in view the utility of these assets in the long term perspective to the economy of the country.”

7. The Commission further determined the capital cost of the Assets-I to V and observed that the other components of tariff will be determined after receipt of the grant/assistance under PSDF and NCEF and disposed Petition No.67/TT/20115 vide order dated 31.8.2017. The Commission further directed the Petitioner to file a fresh petition after receipt of grant/assistance from the Government of India.

8. The Petitioner had filed Petition No. 184/TT/2016 for determination of tariff for



Asset-VI. The Commission allowed AFC for the said asset vide order 27.12.2016 under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC computation. Later, the Commission determined the capital cost of Asset-VI and revised the earlier approved tariff under Regulation 7(7) and disposed the Petition No. 184/TT/2016 vide order 15.12.2017, making similar observations made in order dated 8.1.2016 and directed the Petitioner to file a combined petition in respect of assets covered in Petition Nos. 67/TT/2015 and 184/TT/2016 after receipt of grant/assistance from the Government of India. The relevant portion of the order dated 15.12.2017 is extracted below.

“52..... The other components of tariff and the final tariff will be determined after receipt of grant/ assistance under PSDF and NCEF. The petitioner would continue to recover the AFC granted vide order dated 8.1.2016 as per the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time. The petitioner is directed to file a fresh petition after receipt of grant/assistance from the Government of India. As the petitioner has already issued public notice in the newspapers as provided in the Central Electricity Regulatory Commission (Procedure for making of application for determination of tariff, publication of the application and other related matters) Regulations, 2004 in case of the instant assets, we are of the view that there is no need to issue any fresh notice at the time of filing of fresh petition. The petitioner is also exempted from payment of filing fee.”

9. Subsequently, the Petitioner filed Review Petition No. 43/RP/2017 against order dated 31.8.2017 in Petition No. 67/TT/2015 seeking determination of tariff of Assets-I to V based on the approved capital cost without linking with the receipt of grant/assistance or alternatively allow AFC atleast 90% of the AFC claimed, for inclusion in the PoC computation, till final determination of tariff. The Commission, vide order dated 12.7.2018, rejected the Petitioner's Review Petition and made the following observations.

“13.....In terms of the above directions, the Review Petitioner were granted liberty to approach the Commission through a fresh petition after receipt of grant/assistance from PSDF and NCEF. In terms of the said liberty, the Petitioner may approach the Commission with a fresh petition for final determination of tariff of these assets along with the status of the grants received for consideration of the claims of the Commission in accordance with the 2014 Tariff Regulations.”



10. Consequent to the Commission's directions in orders dated 31.8.2017, 15.12.2017 and 12.7.2018 in Petition Nos. 67/TT/2015, 184/TT/2016 and 43/RP/2017 respectively, the Petitioner has filed the instant petition.

11. The Petitioner, vide affidavit dated 19.3.2019, has submitted the details of PSDF funding from Government of India. The Petitioner has also enclosed MoP OM No 10/1/2014 dated 10.3.2017 regarding sanction of grant from PSDF towards Transmission System associated with "NE-Northern/Western Inter-Connector-I Project" and "Transmission System for development of pooling station in Northern Part of West Bengal and transfer of power from Bhutan to NR/WR (Funding of BNC-Agra HVDC)". While the estimated cost of the Project was ₹1816728 lakh and the grant requested ₹577800 lakh, the sanctioned PSDF grant was ₹288900 lakh. While pursuing with MoP for disbursement of PSDF grant, Petitioner vide affidavit dated 19.3.2019, has referred to the Quarterly Performance Review Meeting of Power Grid for 1st quarter of 2018-19 taken by Secretary (Power) on 11.9.2018 wherein Secretary (Power) advised that in view of the non-availability of PSDF fund, Power Grid should approach CERC for appropriate orders for tariff. As per the terms and conditions of aforementioned MoP letter dated 10.3.2017, the grant shall be utilized by PGCIL by decreasing domestic debt portion of the project and no tariff shall be claimed by PGCIL for the portion of scheme funded by the PSDF. Subsequently Ministry of Finance issued Letter of Authorisation No 2(2)-B(P&A)/2018 dated 21.1.2019 regarding approval of raising EBR (Extra Budgetary Resources) by issuing of Government of India fully serviced Bonds amounting to ₹348753 lakh (out of which ₹288900 lakh is for funding of BNC-Agra HVDC) to be



utilized for meeting of accrued liabilities and to be released as grant for creation of capital assets.

12. The details of the transmission charges claimed by the Petitioner are as under:-

(₹ in lakh)				
Asset-I	2015-16 (Pro-rata)	2016-17	2017-18	2018-19 (Pro-rata)
Depreciation	17629.90	43496.70	44572.54	39480.61
Interest on Loan	13567.09	32050.97	30993.48	25819.01
Return on Equity	13234.32	32676.82	33519.85	29696.78
Interest on Working Capital	1074.16	2621.33	2648.35	2313.13
O&M Expenses	931.29	2357.44	2487.53	2290.02
Total	46436.76	113203.26	114221.75	99599.55

(₹ in lakh)				
Asset-II	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation	214.02	542.85	563.95	579.59
Interest on Loan	314.55	753.12	724.49	687.74
Return on Equity	165.15	418.03	433.91	447.44
Interest on Working Capital	22.33	54.84	55.54	55.89
O&M Expenses	115.21	278.49	287.74	297.26
Total	831.26	2047.33	2065.63	2067.92

(₹ in lakh)				
Asset-III	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation	165.44	416.05	432.12	443.56
Interest on Loan	240.37	570.47	548.03	518.93
Return on Equity	126.01	316.44	328.48	337.96
Interest on Working Capital	15.45	37.82	38.21	38.29
O&M Expenses	58.05	141.74	146.45	151.30
Total	605.32	1482.52	1493.29	1490.04

(₹ in lakh)				
Asset-IV	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation	66.51	146.08	155.63	161.79
Interest on Loan	104.70	215.53	212.08	203.59
Return on Equity	53.19	116.27	123.52	128.99
Interest on Working Capital	8.72	18.34	18.89	19.22
O&M Expenses	64.32	132.91	137.32	141.91
Total	297.44	629.13	647.44	655.50



(₹ in lakh)

Asset-V	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation	37.67	141.07	145.88	152.80
Interest on Loan	54.86	196.41	189.48	184.41
Return on Equity	30.03	112.44	116.26	123.80
Interest on Working Capital	4.29	15.69	15.91	16.31
O&M Expenses	26.63	96.55	99.76	103.07
Total	153.48	562.16	567.29	580.39

(₹ in lakh)

Asset-VI	2016-17 (Pro-rata)	2017-18	2018-19 (Pro-rata)
Depreciation	6386.91	11659.92	10516.49
Interest on Loan	2538.76	4691.76	4111.20
Return on Equity	4932.30	9019.56	8148.17
Interest on Working Capital	334.52	612.96	552.97
O&M Expenses	620.11	1145.05	1079.86
Total	14812.60	27129.25	24408.69

(₹ in lakh)

Particulars	Asset-I	Asset-VI
	2018-19 (Pro-rata)	2018-19 (Pro-rata)
Depreciation	4004.06	1425.70
Interest on Loan	668.48	626.68
Return on Equity	4388.01	1206.25
Interest on Working Capital	227.18	79.35
O&M Expenses	337.02	158.99
Total	9624.75	3496.97

13. The details of the interest on working capital claimed by the Petitioner are as under:-

(₹ in lakh)

Asset-I	2015-16 (Pro-rata)	2016-17	2017-18	2018-19 (Pro-rata)
Maintenance Spares	335.26	353.62	373.13	393.92
O&M expenses	186.26	196.45	207.29	218.84
Receivables	18574.70	18867.21	19036.96	19043.89
Total	19096.22	19417.28	19617.38	19656.65
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest on working capital	1074.16	2621.33	2648.35	2313.13



(₹ in lakh)

Asset-II	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	40.43	41.77	43.16	44.59
O&M expenses	22.46	23.21	23.98	24.77
Receivables	324.14	341.22	344.27	344.65
Total	387.03	406.20	411.41	414.01
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest on working capital	22.33	54.84	55.54	55.89

(₹ in lakh)

Asset-III	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	20.58	21.26	21.97	22.70
O&M expenses	11.43	11.81	12.20	12.61
Receivables	234.95	247.09	248.88	248.34
Total	266.96	280.16	283.05	283.65
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest on working capital	15.50	37.82	38.21	38.29
Pro-rate interest on working capital	15.50	37.82	38.21	38.29

(₹ in lakh)

Asset-IV	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	19.30	19.94	20.60	21.29
O&M expenses	10.72	11.08	11.44	11.83
Receivables	99.15	104.86	107.91	109.25
Total	129.17	135.88	139.95	142.37
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest on working capital	8.72	18.34	18.89	19.22

(₹ in lakh)

Asset-V	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	14.02	14.48	14.96	15.46
O&M expenses	7.79	8.05	8.31	8.59
Receivables	91.83	99.83	101.76	99.87
Total	113.64	122.36	125.03	123.92
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest on working capital	4.37	16.52	16.88	16.73

(₹ in lakh)

Asset-VI	2016-17 (Pro-rata)	2017-18	2018-19 (Pro-rata)
Maintenance Spares	160.22	171.76	185.83
O&M expenses	89.01	95.42	103.24
Receivables	4252.42	4521.54	4667.05
Total	4501.65	4788.72	4956.12
Rate of Interest	12.80%	12.80%	12.80%
Interest on working capital	334.52	612.96	552.97



(₹ in lakh)

Particulars	Asset-I	Asset-VI
	2018-19 (Pro-rata)	2018-19 (Pro-rata)
Maintenance Spares	393.92	185.24
O&M expenses	219.45	103.24
Receivables	12499.58	4541.53
Total	13112.95	4830.01
Rate of Interest	13.50%	12.80%
Interest on working capital	227.18	79.35

Treatment of PSDF grants received

14. As per Regulation 9(6) of the 2014 Tariff Regulations.

“The following shall be excluded or removed from the capital cost of the existing and new project:

- (a) xxx
- (b) xxx
- (c) xxx
- (d) xxx

Provided that any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment shall be excluded from the Capital Cost for the purpose of computation of interest on loan, return on equity and depreciation;”

15. Further, Regulation 19 of the 2014 Tariff Regulations provides as follows.

“19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

- i. xxx
- ii. xxx
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.

xxxxx”

16. As stated in Government of India’s approval referred in para 11, the Petitioner has received ₹288900 lakh in lieu of PSDF grant and it has been adjusted in Assets-I and VI by decreasing the domestic loan deployed for the said assets.

17. The COD of Asset-I is 1.11.2015 and that of Asset-VI is 2.9.2016 whereas the



EBR of ₹288900 lakh has been received on 14.02.2019. Petitioner has utilised the grant in these two assets- ₹270045.33 lakh in Asset-I and ₹18854.67 lakh in Asset-VI. Accordingly, while working out the tariff, AFC has been calculated in two parts for both these assets- first from COD to 13.2.2019 and the other being from 14.2.2019 to 31.3.2019.

18. Application of grant is in line with the terms and conditions specified by the Ministry of Finance as well as Ministry of Power. As the grant has been received post-COD and for decreasing the domestic debt portion of the Project, the same has been reduced from the loan portfolio corresponding to high interest bearing domestic loans. This may be seen as similar to re-financing with zero interest loan. Accordingly, considering the grant received, tariff has been worked out in Asset-I and Asset-II.

19. The Petitioner has served the petition to the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the notices published by the Petitioner under Section 64 of the Electricity Act, 2003. Madhya Pradesh Power Management Company Ltd (MPPMCL), Respondent No. 25 has filed reply vide affidavit dated 29.1.2019. Bihar State Power (Holding) Company Limited (BSPHCL), Respondent No.49, has filed reply vide affidavit dated 12.2.2019, BRPL, Respondent No.22 has filed its reply vide affidavit dated 18.2.2019. MPPMCL has raised issue of completion cost, cost over-run, initial spares and wage revision. BSPHCL and BRPL have raised similar issues and they are regarding cost over-run, additional capitalisation, IDC, initial spares, transmission system, O&M Expenses, wage revision, etc. The Petitioner has filed



separate rejoinders to the reply of BSPHCL, MPPMCL and BRPL vide affidavits dated 5.4.2019. We have considered the submissions made by the Petitioner and the Respondents in the relevant portions of the instant order. Having heard the representatives of the Petitioner present at the hearing and perused the material on record, we proceed to dispose of the petition.

Capital Cost

20. The summary of apportioned approved cost as per investment approval, and the actual capital cost claimed by the Petitioner vide Auditor certificate dated 14.8.2018 is as under.

Asset	Original Apportioned Approved Cost	Revised Apportioned Approved cost RCE-I	Revised Apportioned Approved cost RCE-II	Expenditure incurred upto COD		Actual Additional Capitalization			Estimated Additional Capitalization			Estimated Completion Cost
						2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	
I	641074.53	871003.91	887106.06		806800.85	14647.04	25776.83	15422.38	12578.99	2709.11	--	877935.20
II & III	10155.26	11767.82	13210.96	Asset -II	2297.93	232.46	120.35	75.28	87.69	64.41	0.00	2878.12
				Asset -III	7005.64	928.44	269.19	344.56	92.42	120.96	40.00	8801.31
				Combined	9303.57	1160.90	389.54	419.94	180.11	185.37	40.00	11679.43
IV	2281.57	3252.78	3617.44		2565.59	293.86	210.06	160.04	79.02	28.97	15.00	3352.54
V	2395.22	3175.08	3421.57		2601.95	204.87	120.07	75.10	206.13	--	--	3208.12
VI	194699.17	254374.87	259005.37		209794.48	--	14476.69	11385.44	5259.48	200.55	--	241116.64

21. The details of the capital cost certified by the Auditor are on the basis of information drawn from the reviewed books of accounts of PGCIL upto 31.12.2018.

22. MPPMCL has submitted that the Petitioner has submitted that there is no cost over-run as per RCE and while doing so has aggregated estimated competition cost of all the 6 assets. MPPMCL has submitted that it is an established principle that capital cost is always considered asset-wise. The Petitioner is adjusting the cost



saved in one asset to cover the excess cost in other assets and the same may not be permitted and the cost over-run be disallowed as it is attributable to the Petitioner.

23. In response, the Petitioner submitted that the estimated completion cost of the instant assets based on the Auditor's certificate is ₹1137291 lakh including IEDC and IDC. Therefore, there is no cost over-run w.r.t RCE. However, individually there is cost over-run of about ₹6931 lakh, ₹99.76 lakh, ₹33.04 lakh for Asset-1, Asset-IV and Asset-V respectively w.r.t. approved apportioned cost as per the RCE. The Petitioner submitted that the reasons for item wise cost variation between FR approved cost, RCE approved cost and cost as on COD and Add-Cap are given in the petition.

24. We have considered the submissions of MPPMCL and the Petitioner. It is observed that there is increase in cost of the instant assets when compared to the FR approved apportioned cost. It was due to the price variation, new additions, increase in the compensation paid towards land and forest and FERV. The increase in cost cannot be attributed to the Petitioner. Accordingly, the increase in cost of the instant assets is approved.

Time over-run

25. As per the Investment Approval dated 27.2.2009, the instant assets were scheduled to be put into commercial operation progressively within 54 months from the date of investment approval. Accordingly, the scheduled date of commercial operation was 26.8.2013. However, there was time over-run in case of all the five assets. The details are as follows.



Assets	Scheduled date of Completion (SCOD)	Actual COD	Delay
Asset-I	26.8.2013	1.11.2015	26 months and 6 days
Asset-II		28.10.2015	26 months and 3 days
Asset-III		27.10.2015	26 months and 1 days
Asset-IV		1.10.2015	25 months and 5 days
Asset-V		19.12.2015	27 months and 24 days
Asset-VI		2.9.2016	36 months and 7 days

26. The time over-run in case of the instant assets have already been dealt in detail and was condoned vide orders dated 31.8.2017 and 15.12.2017 in Petition Nos. 67/TT/2015 and 184/TT/2016 respectively as the time over-run was not attributable to the Petitioner. As such, we do not find any reason to discuss the same again in this order.

Interest During Construction (IDC)

27. The details of the IDC and IEDC claimed by the Petitioner are as follows.

Particulars	(₹ in lakh)	
	IDC claimed	IEDC claimed
Asset-I	97700.68	27850.95
Asset-II	249.81	71.94
Asset-III	948.20	352.92
Asset-IV	303.71	101.24
Asset-V	247.03	45.13
Asset-VI	25720.52	4694.54

28. The Petitioner has further submitted IDC statement which is tabulated below.

Particulars	(₹ in lakh)			
	IDC Discharged upto COD	Discharged during 2015-16	Discharged during 2016-17	Discharged during 2016-17
Asset-I	91219.60	4690.27	1790.81	0.00
Asset-II	186.40	63.41	0.00	0.00
Asset-III	948.20	0.00	0.00	0.00
Asset-IV	303.71	0.00	0.00	0.00
Asset-V	212.62	34.41	0.00	0.00
Asset-VI	24931.83	0.00	751.33	37.36

29. BSPCHL and BRPL have submitted that IDC upto COD should only be



capitalised and there is no provision to include accrued IDC under Regulation 14(1) of the 2014 Tariff Regulations as projected additional capital expenditure. The Petitioner has submitted that the IDC is on the basis of cash flow and that the IDC to be discharged during the respective years has not been included in the additional capital expenditure of the respective year and it is included in the additional capital expenditure only in the year of discharge. We have considered the submissions of the Petitioner and the Respondents. The IDC is allowed as per the 2014 Tariff Regulations.

30. The Petitioner has submitted IDC computation statement which consists of the name of the loan, drawl date, loan amount, interest rate and interest claimed. The IDC is worked out based on the details given in the IDC statement. Further, the loan amount as on COD has also been mentioned in Form-6 and Form-9C. While going through these documents certain discrepancies have been observed such as mismatch in loan amount between IDC statement and in Form-6 and Form-9C. The allowable IDC has been worked out based on the available information and relying on loan amount as per tariff Form-9C.

31. IDC statement includes SBI loan pertaining to different quarters and the Petitioner has shown multiple drawls with floating interest rate interest. Hence, we have considered the same rate of interest as given in Form-9C. However, the Petitioner is directed to submit the detailed IDC statement by rectifying the above mentioned deviation, at the time of true up of 2014-19 period.

32. The details of the IDC allowed are summarized under.



(₹ in lakh)

Particulars	IDC claimed as per the Auditor's Certificate	IDC disallowed due to computational difference	IDC allowed on accrual basis	IDC allowed on cash basis as on COD (worked out)	Un-discharged IDC liability as on COD
	1	2	3=(1-2)	4	5=(3-4)
Asset-I	97700.68	406.91	97293.77	90845.62	6448.16
Asset-II	249.81	0.00	249.81	183.32	66.49
Asset-III	948.20	0.00	948.20	948.20	0.00
Asset-IV	303.71	0.00	303.71	303.71	0.00
Asset-V	247.03	0.00	247.03	212.62	34.41
Asset-VI	25720.52	107.22	25613.33	24834.06	779.24

33. The un-discharged portion of IDC has been considered as ACE during the year of discharge. The allowed IDC shall be reviewed at the time of truing-up subject to the submission of detailed IDC computation statement explaining/reconciling the deviations observed above.

Incidental Expenditure During Construction (IEDC)

34. The IEDC as per the abstract cost estimate is 5.00% of the estimated hard cost which has been considered as the maximum limit for allowing IEDC. The IEDC claimed is within the ceiling limit of abstract cost. Thus, IEDC claimed by the Petitioner as mentioned above is allowed as on COD.

Initial spares

35. The Petitioner has claimed initial spares for all the transmission lines and sub-station covered in the instant petition. The year-wise discharge details of initial spares are given below:-

(₹ in lakh)

Particulars	Element	Initial Spares claimed	Discharged upto COD	Discharged during the year			
				2015-16	2016-17	2017-18	2018-19
Asset-I	T/L	4760.17	3466.13	190.42	1013.17	82.99	7.46
	S/S	7362.84	2577.78	55.42	973.80	982.00	2773.84



Asset-II	T/L	7.35	7.35	0.00	0.00	0.00	0.00
	S/S	0.00	0.00	0.00	0.00	0.00	0.00
Asset-III	T/L	122.50	112.47	0.62	0.00	9.41	0.00
	S/S	0.00	0.00	0.00	0.00	0.00	0.00
Asset-IV	T/L	47.27	26.85	2.06	16.97	1.39	0.00
	S/S	25.85	19.93	0.22	2.13	2.75	0.82
Asset-V	T/L	0.00	0.00	0.00	0.00	0.00	0.00
	S/S	24.30	4.16	0.37	4.79	3.11	11.87
Asset-VI	T/L	420.58	367.72	0.00	52.86	0.00	0.00
	S/S	6999.95	2507.21	0.00	957.30	946.40	2589.04

36. BSPHCL and BRPL have submitted that the initial spares claimed by the Petitioner are beyond the ceiling limits prescribed in Regulation 13 of the 2014 Tariff Regulations and it may allowed as per the limits specified in the said Regulation. MPPMCL has submitted that the initial spares claimed by the Petitioner are more than the norms specified in the 2014 Tariff Regulations and the same may be restricted. In response, the Petitioner has submitted that initial spares claimed are within the ceiling limit of 4% and 1% for sub-station and transmission line respectively specified in Regulation 13 of the 2014 Tariff Regulations and the same may be allowed as per the limits specified in the 2014 Tariff Regulations. Initial spares have been worked out based on the 2014 Tariff Regulations and the discharge details given by the Petitioner. Details of initial spares allowed are given below.

Particulars	Element	Plant and Machinery cost up to cut-off date	Initial spares claimed	Ceiling limit as per the 2014 Tariff Regulations	Initial spares worked out as per the 2014 Tariff Regulations	Excess initial spares
Asset-I	Transmission line	552011.36	4760.17	1.00%	5527.79	-
	Sub-station	170029.12	7362.84	4.00%	6777.76	585.08
Asset-II	Transmission line	728.03	7.35	1.00%	7.28	0.07
	Sub-station	1454.59	0.00	4.00%	0.00	0.00
Asset-III	Transmission line	5671.85	122.50	1.00%	56.05	66.45



	Sub-station	1454.59	0.00	4.00%	0.00	0.00
Asset-IV	Transmission line	1060.92	47.27	1.00%	10.24	37.03
	Sub-station	1519.50	25.85	4.00%	25.85#	0.00
Asset-V	Transmission line	0.00	0.00	1.00%	0.00	0.00
	Sub-station	2461.66	24.30	4.00%	24.30	-
Asset-VI	Transmission line	25102.33	420.58	1.00%	249.31	171.27
	Sub-station	164152.37	6999.95	4.00%	6548.02	451.93

Restricted to claim.

37. Excess initial spares have been reduced from the capital cost as on the COD of the asset or from the respective additional capitalization based on the discharge details submitted by the Petitioner. It shall be reviewed at the time of truing up.

Capital Cost allowed as on COD

38. Details of the capital cost considered on COD for computing tariff are given below.

(₹ in lakh)						
Particulars	Capital cost as on COD claimed by Petitioner	IDC disallowed on computational difference	Un-discharged IDC as on COD	IEDC disallowed on COD	Excess initial spares as on COD	Capital cost as on COD considered for tariff calculation
1	2	3	4	5	6	7= (2-3-4-5-6)
Asset-I	806800.85	406.91	6448.16	0.00	0.00	799945.79
Asset-II	2297.93	0.00	66.49	0.00	0.07	2231.37
Asset-III	7005.64	0.00	0.00	0.00	56.42	6949.22
Asset-IV	2565.59	0.00	0.00	0.00	16.61	2548.98
Asset-V	2601.95	0.00	34.41	0.00	0.00	2567.54
Asset-VI	209794.48	107.22	779.24	0.00	118.41	208789.61

Additional Capital Expenditure (ACE)

39. Additional capital expenditure has been considered as per Regulation 14(1) of the 2014 Tariff Regulations. The cut-off date for Asset-I to Asset-V and Asset-VI is 31.3.2018 and 31.3.2019 respectively. The Petitioner has claimed ACE based on the cost certified by the Auditor. In addition, the Petitioner has claimed the ACE towards



discharge of IDC liability and spares which are adjusted as per the discharge details. BSPHCL and BRPL have submitted that the Petitioner has not furnished the justification or the justification for additional capital expenditure and the Petitioner should be directed to file the details of additional capital expenditure as per Regulation 14(1) of the 2014 Tariff Regulations. In response, the Petitioner has submitted that the additional capital expenditure incurred/projected to be incurred is mainly on account of Balance/Retention Payments and hence the same may be allowed.

40. We have considered the submissions of the Petitioner and the Respondents. The additional capital expenditure is allowed as per Regulation 14 of the 2014 Tariff Regulations. The add cap allowed is given below which includes the un-discharged portions corresponding to IDC and Initial Spares.

Particulars	(₹ in lakh)			
	2015-16	2016-17	2017-18	2018-19
Asset-I*	19337.31	27534.72	15422.38	10408.61
Asset-II	295.87	120.35	75.28	87.69
Asset-III	927.82	269.19	335.25	92.42
Asset-IV	291.80	193.09	158.65	79.02
Asset-V	239.28	120.07	75.10	206.13
Asset-VI*	-	15175.16	11413.34	4144.71

*Add cap for financial year 2018-19 is upto 13.2.2019.

41. Add cap allowed for Asset-I and Asset-VI during 14.2.2019 - 1.3.2019 is given below.

Particulars	(₹ in lakh)
	2018-19 (Pro-rata)
Asset-I	1580.97
Asset-VI	661.03

The above allowed additional capital expenditure is subject to true up.



Capital cost summary from COD to 31.3.2019

42. Based on the above, the summary of capital cost considered for tariff from COD to 31.3.2019 is given below:-

	Capital Cost allowed as on COD	Add cap for 2015-16	Add Cap for 2016-17	Add cap for 2017-18	Add cap for 2018-19	(₹ in lakh) Total estimated completion cost as on 31.3.2019
Asset-I	799945.79	19337.31	27534.72	15422.38	10408.61	*872648.81
Asset-II	2231.37	295.87	120.35	75.28	87.69	2810.56
Asset-III	6949.22	927.82	269.19	335.25	92.42	8573.90
Asset-IV	2548.98	291.80	193.09	158.65	79.02	3271.54
Asset-V	2567.54	239.28	120.07	75.10	206.13	3208.12
Asset-VI	208789.61	-----	15175.16	11413.34	4144.71	*239522.83

* Completion cost for Assets-I and VI are as on 13.2.2019.

43. In view of above, the total additional capital expenditure allowed during 14.2.2019 to 31.3.2019, completion cost for Assets-I and VI is given below.

Particulars	(₹ in lakh) Completion cost as on 31.3.2019
Asset-I	604184.44
Asset-VI	221332.96

Debt-Equity Ratio

44. Debt:equity ratio is considered as per Regulation 19 of the 2014 tariff Regulations. The Petitioner has initially claimed debt equity ratio as 70:30 as per investment approval dated 27.2.2009. As per RCE-I, debt:equity ratio was revised to 80:20. After availing grants, the Petitioner again revised the debt:equity ratio to 70:30. However, tariff forms were based debt:equity ratio as 80:20. Thus, we have considered debt equity ratio as 80:20 as on COD and as on 31.3.2019 for computing tariff.

45. The details of debt:equity as on dates of commercial operation and 31.3.2019



considered on normative basis are as under.

(₹ in lakh)

Asset-I	Capital cost as on COD		Capital cost as on 31.3.2019*	
	Amount	%	Amount	%
Debt	639956.65	80.00	698119.07	80.00
Equity	159989.14	20.00	174529.74	20.00
Total	799945.79	100.00	872648.81	100.00

(₹ in lakh)

Asset-II	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	1785.10	80.00	2248.46	80.00
Equity	446.27	20.00	562.10	20.00
Total	2231.37	100.00	2810.56	100.00

(₹ in lakh)

Asset-III	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	5559.38	80.00	6859.12	80.00
Equity	1389.84	20.00	1714.78	20.00
Total	6949.22	100.00	8573.90	100.00

(₹ in lakh)

Asset-IV	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	2039.18	80.00	2617.23	80.00
Equity	509.80	20.00	654.31	20.00
Total	2548.98	100.00	3271.54	100.00

(₹ in lakh)

Asset-V	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	2054.04	80.00	2566.50	80.00
Equity	513.50	20.00	641.62	20.00
Total	2567.54	100.00	3208.12	100.00

(₹ in lakh)

Asset-VI	Capital cost as on COD		Capital cost as on 31.3.2019*	
	Amount	%	Amount	%
Debt	167031.69	80.00	191618.26	80.00
Equity	41757.92	20.00	47904.57	20.00
Total	208789.61	100.00	239522.83	100.00

*Debt:equity ratio as on 13.2.2019

Add-cap has been considered in the debt equity ratio of 80:20.



Return on Equity (RoE)

46. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of RoE. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity.

47. BSPHCL and BRPL have submitted that effective tax rate should be computed in accordance with Regulation 25 of the 2014 Tariff Regulations and the Petitioner should be directed to furnish the complete details of working of the effective tax rate and the tax audit report for 2014-15 and the reasons for opting for MAT. In response, the Petitioner has submitted that the Petitioner is liable to pay income tax at MAT rate, the RoE has been calculated @ 20.243% after grossing up the RoE with MAT rate of 20.961% based on the rate prescribed by the Commission in Regulation 25(2)(i) of the 2014 Tariff Regulations. The Petitioner has submitted that as per Regulation 25(3) of the 2014 Tariff Regulations, the grossed up rate of RoE at the end of every financial year shall be trued up based on actual tax paid together with any additional tax demand including interest thereon duly adjusted for any refund of tax including interest received from the IT authorities pertaining to the 2014-15 to 2018-19 tariff period on actual gross income of any financial year. Any under-recovery or over-recovery of grossed up rate on RoE after truing up shall be recovered or refunded to beneficiaries on year to year basis. The Petitioner has also submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of tax including interest received from IT authorities shall be recoverable after completion of income tax assessment of the financial year.



48. We have considered the submissions made by the Respondents and the Petitioner. Return on Equity has been computed after adjusting grants received by the Petitioner. ROE is calculated @ 19.610% p.a. on average equity. The MAT Rate for the financial year 2013-14 is considered for computing RoE, which is subject to true up.

49. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of RoE, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, the RoE allowed is as follows:-

(₹ in lakh)				
Asset-I	2015-16 (Pro-rata)	2016-17	2017-18	2018-19 (Pro-rata)
Opening Gross Normative Equity	159989.14	163856.60	169363.54	172448.02
Addition due to Additional Capitalization	3867.46	5506.94	3084.48	2081.72
Closing Gross Normative Equity	163856.60	169363.54	172448.02	174529.74
Average Normative Equity	161922.87	166610.07	170905.78	173488.88
Rate of Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	13223.20	32672.24	33514.62	29652.33

(₹ in lakh)				
Asset-II	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Gross Normative Equity	446.28	505.45	529.52	544.58
Addition due to Additional Capitalization	59.17	24.07	15.06	17.54
Closing Gross Normative Equity	505.45	529.52	544.58	562.11
Average Normative Equity	475.86	517.49	537.05	553.35
Rate of Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	39.88	101.48	105.32	108.51

(₹ in lakh)				
Asset-III	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Gross Normative Equity	1389.85	1575.41	1629.25	1696.30
Addition due to Additional Capitalization	185.56	53.84	67.05	18.48
Closing Gross Normative Equity	1575.41	1629.25	1696.30	1714.78



Average Normative Equity	1482.63	1602.33	1662.78	1705.54
Rate of Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	125.06	314.22	326.07	334.46

(₹ in lakh)

Asset-IV	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Gross Normative Equity	509.80	568.16	606.78	638.51
Addition due to Additional Capitalization	58.36	38.62	31.73	15.80
Closing Gross Normative Equity	568.16	606.78	638.51	654.31
Average Normative Equity	538.98	587.47	622.65	646.41
Rate of Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	52.99	115.20	122.10	126.76

(₹ in lakh)

Asset-V	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Gross Normative Equity	513.50	561.36	585.37	600.39
Addition due to Additional Capitalization	47.86	24.01	15.02	41.23
Closing Gross Normative Equity	561.36	585.37	600.39	641.62
Average Normative Equity	537.43	573.36	592.88	621.00
Rate of Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	30.03	112.44	116.26	121.78

(₹ in lakh)

Asset-VI	2016-17 (Pro-rata)	2017-18	2018-19 (Pro-rata)
Opening Gross Normative Equity	41757.92	44792.96	47075.63
Addition due to Additional Capitalization	3035.03	2282.67	828.94
Closing Gross Normative Equity	44792.96	47075.63	47904.57
Average Normative Equity	43275.44	45934.29	47490.10
Rate of Return on Equity (Base Rate)	15.50%	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	4905.79	9007.71	8116.90



Pro-rata ROE from 14.2.2019 to 31.3.2019

Particulars	(₹ in lakh)	
	Asset-I 2018-19 (Pro-rata)	Asset-VI 2018-19 (Pro-rata)
Opening Gross Normative Equity	174529.74	47905.32
Addition due to Additional Capitalization	457.89	143.50
Closing Gross Normative Equity	174987.63	48048.83
Average Normative Equity	174758.69	47977.07
Rate of Return on Equity (Base Rate)	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%
Return on Equity (Pre-tax)	4307.18	1182.46

Interest on Loan (IoL)

50. The Petitioner has submitted that the IoL has been claimed on the basis of rate prevailing as on COD and the change in interest due to floating rate of interest applicable, if any, needs to be claimed/ adjusted over the 2014-19 tariff period directly with the beneficiaries.

51. We have considered the submissions of the Petitioner. IoL has been worked out after adjusting grants received by the Petitioner. The Petitioner's entitlement to IoL has been calculated as per the provisions of Regulation 26 of the 2014 Tariff Regulations as detailed below:-

- a) The gross normative loan has been considered as per the loan amount determined based on the debt equity ratio applied on the allowed capital cost.
- b) The depreciation of every year has been considered as normative repayment of loan of concerned year.
- c) The weighted average rate of interest on actual loan portfolio has been worked out by considering the gross amount of loan, repayment and rate of interest as mentioned in the petition, which has been applied on the normative average loan during the year to arrive at the IoL.



52. The details of IoL allowed are as under:-

(₹ in lakh)

Asset-I	2015-16 (Pro-rata)	2016-17	2017-18	2018-19 (Pro-rata)
Gross Normative Loan	639956.65	655426.50	677454.27	689792.17
Cumulative Repayment up to previous Year	0.00	17612.08	61088.34	105639.57
Net Loan-Opening	639956.65	637814.41	616365.93	584152.60
Addition due to Additional Capitalization	15469.85	22027.77	12337.90	8326.89
Repayment during the year	17612.08	43476.26	44551.23	39394.49
Net Loan-Closing	637814.41	616365.93	584152.60	553085.01
Average Loan	638885.53	627090.17	600259.27	568618.80
Weighted Average Rate of Interest on Loan	5.09%	5.11%	5.16%	5.20%
Interest on Loan	13542.27	32044.31	30973.38	25771.17

(₹ in lakh)

Asset-II	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross Normative Loan	1785.10	2021.80	2118.08	2178.30
Cumulative Repayment up to previous Year	0.00	49.54	176.18	307.86
Net Loan-Opening	1785.10	1972.26	1941.90	1870.45
Addition due to Additional Capitalization	236.70	96.28	60.22	70.15
Repayment during the year	49.54	126.64	131.67	135.87
Net Loan-Closing	1972.26	1941.90	1870.45	1804.73
Average Loan	1878.68	1957.08	1906.17	1837.59
Weighted Average Rate of Interest on Loan	9.4655%	9.3647%	9.2735%	9.2046%
Interest on Loan	76.00	183.27	176.77	169.14

(₹ in lakh)

Asset-III	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross Normative Loan	5559.38	6301.64	6516.99	6785.19
Cumulative Repayment up to previous Year	0.00	164.16	577.20	1006.05
Net Loan-Opening	5559.38	6137.48	5939.80	5779.14
Addition due to Additional Capitalization	742.26	215.35	268.20	73.94
Repayment during the year	164.16	413.03	428.86	440.05
Net Loan-Closing	6137.48	5939.80	5779.14	5413.03
Average Loan	5848.43	6038.64	5859.47	5596.08
Weighted Average Rate of Interest on Loan	9.4830%	9.3804%	9.2840%	9.2084%
Interest on Loan	238.56	566.45	543.99	515.31



(₹ in lakh)

Asset-IV	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross Normative Loan	2039.18	2272.62	2427.09	2554.01
Cumulative Repayment up to previous Year	0.00	66.22	210.87	364.58
Net Loan-Opening	2039.18	2206.40	2216.22	2189.43
Addition due to Additional Capitalization	233.44	154.47	126.92	63.22
Repayment during the year	66.22	144.65	153.71	159.84
Net Loan-Closing	2206.40	2216.22	2189.43	2092.81
Average Loan	2122.79	2211.31	2202.83	2141.12
Weighted Average Rate of Interest on Loan	9.8002%	9.6560%	9.5135%	9.4157%
Interest on Loan	104.30	213.52	209.57	201.60

(₹ in lakh)

Asset-V	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross Normative Loan	2054.04	2245.46	2341.52	2401.60
Cumulative Repayment up to previous Year	0.00	37.67	178.74	324.62
Net Loan-Opening	2054.04	2207.80	2162.78	2076.98
Addition due to Additional Capitalization	191.42	96.06	60.08	164.90
Repayment during the year	37.67	141.07	145.88	152.80
Net Loan-Closing	2207.80	2162.78	2076.98	2089.08
Average Loan	2130.92	2185.29	2119.88	2083.03
Weighted Average Rate of Interest on Loan	9.0356%	8.9877%	8.9381%	8.8969%
Interest on Loan	54.86	196.41	189.48	185.33

(₹ in lakh)

Asset-VI	2016-17 (Pro-rata)	2017-18	2018-19 (Pro-rata)
Gross Normative Loan	167031.69	179171.82	188302.49
Cumulative Repayment up to previous Year	0.00	6352.37	17997.98
Net Loan-Opening	167031.69	172819.45	170304.51
Addition due to Additional Capitalization	12140.13	9130.67	3315.77
Repayment during the year	6352.37	11645.61	10478.15
Net Loan-Closing	172819.45	170304.51	163142.13
Average Loan	169925.57	171561.98	166723.32
Weighted Average Rate of Interest on Loan	2.5700%	2.7300%	2.8500%
Interest on Loan	2524.54	4683.64	4141.43



Pro-rata IOL from 14.2.2019 to 31.3.2019

Particulars	(₹ in lakh)	
	Asset-I 2018-19 (Pro-rata)	Asset-VI 2018-19 (Pro-rata)
Gross Normative Loan	428073.74	172766.61
Cumulative Repayment up to previous Year	145034.06	28476.13
Net Loan-Opening	283039.68	144290.48
Addition due to Additional Capitalization	1123.08	517.53
Repayment during the year	3950.32	1405.53
Net Loan-Closing	280212.43	143402.48
Average Loan	281626.05	143846.48
Weighted Average Rate of Interest on Loan	1.7600%	2.130%
Interest on Loan	622.96	385.08

Depreciation

53. The Petitioner has claimed the actual depreciation as a component of annual fixed charges as per Regulation 27 of the 2014 Tariff Regulations. The instant transmission assets were put under commercial operation 2015 and 2016. Accordingly, the assets will complete 12 years after the current tariff period. As such, depreciation has been calculated annually based on Straight Line Method in accordance with Regulation 27 at the rates specified in Appendix-II to the 2014 Tariff Regulations.

54. The details of the depreciation worked out are as under:-

Asset-I	(₹ in lakh)			
	2015-16 (Pro-rata)	2016-17	2017-18	2018-19 (Pro-rata)
Opening Gross Block	799945.79	819283.10	846817.81	862240.19
Additional Capital expenditure	19337.31	27534.72	15422.38	10408.61
Closing Gross Block	819283.10	846817.81	862240.19	872648.81
Average Gross Block	809614.44	833050.45	854529.00	867444.50
Rate of Depreciation	5.2237%	5.2189%	5.2135%	5.2106%
Depreciable Value	727009.10	748101.51	767432.21	779056.16
Remaining Depreciable Value	727009.10	730489.43	706343.87	673416.58
Depreciation	17612.08	43476.26	44551.23	39394.49



(₹ in lakh)

Asset-II	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Gross Block	2231.37	2527.24	2647.59	2722.87
Additional Capital expenditure	295.87	120.35	75.28	87.69
Closing Gross Block	2527.24	2647.59	2722.87	2810.56
Average Gross Block	2379.31	2587.42	2685.23	2766.72
Rate of Depreciation	4.8721%	4.8945%	4.9035%	4.9110%
Depreciable Value	2040.91	2228.21	2316.24	2389.58
Remaining Depreciable Value	2040.91	2178.67	2140.06	2081.72
Depreciation	49.54	126.64	131.67	135.87

(₹ in lakh)

Asset-III	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Gross Block	6949.22	7877.04	8146.23	8481.48
Additional Capital expenditure	927.82	269.19	335.25	92.42
Closing Gross Block	7877.04	8146.23	8481.48	8573.90
Average Gross Block	7413.13	8011.64	8313.86	8527.69
Rate of Depreciation	5.1483%	5.1554%	5.1583%	5.1602%
Depreciable Value	6571.35	7110.01	7382.01	7574.46
Remaining Depreciable Value	6571.35	6945.85	6804.81	6568.41
Depreciation	164.16	413.03	428.86	440.05

(₹ in lakh)

Asset-IV	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Gross Block	2548.98	2840.78	3033.87	3192.52
Additional Capital expenditure	291.80	193.09	158.65	79.02
Closing Gross Block	2840.78	3033.87	3192.52	3271.54
Average Gross Block	2694.88	2937.32	3113.19	3232.03
Rate of Depreciation	4.9011%	4.9245%	4.9373%	4.9454%
Depreciable Value	2324.92	2543.12	2701.41	2808.36
Remaining Depreciable Value	2324.92	2476.90	2490.54	2443.78
Depreciation	66.22	144.65	153.71	159.84

(₹ in lakh)

Asset-V	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Gross Block	2567.54	2806.82	2926.89	3001.99
Additional Capital expenditure	239.28	120.07	75.10	206.13
Closing Gross Block	2806.82	2926.89	3001.99	3208.12
Average Gross Block	2687.18	2866.86	2964.44	3105.06
Rate of Depreciation	4.9198%	4.9208%	4.9209%	4.9212%
Depreciable Value	2368.22	2529.93	2617.76	2744.31
Remaining Depreciable Value	2368.22	2492.26	2439.02	2419.69
Depreciation	37.67	141.07	145.88	152.80



(₹ in lakh)			
Asset-VI	2016-17 (Pro-rata)	2017-18	2018-19 (Pro-rata)
Opening Gross Block	208789.61	223964.77	235378.12
Additional Capital expenditure	15175.16	11413.34	4144.71
Closing Gross Block	223964.77	235378.12	239522.83
Average Gross Block	216377.19	229671.45	237450.47
Rate of Depreciation	5.0785%	5.0706%	5.0629%
Depreciable Value	185684.42	192513.24	204478.07
Remaining Depreciable Value	185684.42	186160.88	186480.09
Depreciation	6352.37	11645.61	10478.15

Pro-rata depreciation from 14.2.2019 to 31.3.2019

(₹ in lakh)		
Particulars	Asset-I	Asset-VI
	2018-19 (Pro-rata)	2018-19 (Pro-rata)
Opening Gross Block	602603.48	220671.94
Additional Capital expenditure	1580.97	661.03
Closing Gross Block	604184.44	221332.96
Average Gross Block	603393.96	221002.45
Rate of Depreciation	5.2090%	5.0602%
Depreciable Value	784451.47	213616.48
Remaining Depreciable Value	639417.41	185140.35
Depreciation	3950.32	1405.53

Operation and Maintenance Expenses (O&M Expenses)

55. The Petitioner has submitted that O&M Expenses claimed for the instant assets are based on the norms specified by the Commission in Regulation 29(3) of the 2014 Tariff Regulations. The Petitioner has submitted that the O&M Expenses for the tariff period 2014-19 had been arrived at on the basis of normalized actual O&M Expenses during the period 2008-09 to 2012-13. The Petitioner has further submitted that the wage revision of the employees is due during 2014-19 and actual impact of wage hike effective from a future date has not been factored in fixation of the normative O&M rates specified for the tariff block 2014-19. The Petitioner has submitted that it would approach the Commission for suitable revision in norms for O&M Expenses for claiming the impact of wage hike during 2014-19, if any.



56. BRPL and BSPHCL have submitted that Petitioner has claimed the O&M Expenses for Earth Electrode which is not permissible. The Respondents have further submitted that increase in the employee cost due to wage revision must be taken care by the Petitioner by increase its productivity. In response, the Petitioner has submitted that Earth Electrode Transmission Line is a 132 kV Transmission Line comprising tower, conductor, insulator, etc. which is part of subject transmission system and essentials for HVDC system. Therefore, O&M Expenses are claimed as per the 2014 Tariff Regulations.

57. MPPMCL has submitted that the Petitioner is a profit making body and it has to bear the financial implications of wage revision of employees and Respondents are not liable to bear this additional burden. MPPMCL has submitted that there is no provision in the 2014 Tariff Regulations for revision of O&M Expenses. If the Petitioner wishes to extend wage revision benefit to its employees, it should do by increasing its productivity, reducing the wasteful expenditure and early completion of projects. Therefore, the claim of Petitioner to include wage revision under O&M Expenses is baseless and the petitioner's prayer for revision of O&M Expenses is liable to be rejected.

58. In response, the Petitioner has submitted that the O&M Expenses specified in Regulation 29(3)(a) of the 2014 Tariff Regulations for 2014-19 period has been arrived by considering (i) normalized actual O&M Expenses of the Petitioner on its various projects in various regions during the year 2008-09, 2009-10, 2010-11, 2011-12 and 2012-13. The Petitioner being a CPSU, the scheme of wage revision is binding on the Petitioner. However, the actual impact of wage hike (due w.e.f. 1.1.2017) was not factored in fixation of the normative O&M rates prescribed for the



tariff block 2014-19. In line with the Regulation 19(f)(ii) of 2014 Tariff Regulations, norms for O&M Expenses for the year 2009-10 had to be derived considering the impact of wage hike of the employees under PSUs. Accordingly, prayer has been made by Petitioner for approaching the Commission for suitable revision in the norms for O&M Expenses for claiming the impact of wage hike, if any, during period 2014-19.

59. We have considered the submissions of the Petitioner and the Respondents. The O&M Expenses for the instant assets have been worked out as per the norms specified in the 2014 Tariff Regulations. As regards the impact of wage revision, any application filed by the Respondents in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

60. The Petitioner has claimed the following O&M Expenses under Regulation 29(4)(a) of the 2014 Tariff Regulations.

(₹ in lakh)

Asset	2015-16	2016-17	2017-18	2018-19
Asset-I	931.29	2357.44	2487.53	2626.12
Asset-II	115.21	278.40	287.74	297.26
Asset-III	58.05	141.74	146.45	151.30
Asset-IV	64.32	132.91	137.32	141.91
Asset-V	26.63	96.55	99.76	103.07
Asset-VI		620.11	1145.05	1238.84

61. Norms for O&M expenditure for transmission system has been specified under Regulation 29(4) of the 2014 Tariff Regulations and they are as under.

(₹ in lakh)

Element	2015-16	2016-17	2017-18	2018-19
Talcher-Kolar HVDC bi-pole Scheme	1271	1378	1493	1617
Single Circuit single conductor	0.209	0.216	0.223	0.23
Double Circuit (Twin & Triple Conductor)	0.731	0.755	0.78	0.806



Multi Circuit (Bundled conductor with four or more sub-conductors)	1.925	1.989	2.055	2.123
400 kV bays	62.30	64.37	66.51	68.71

62. The O&M Expenses have been worked out as per the norms specified in the 2014 Tariff Regulations. The O&M Expenses allowed are as follows.

(₹ in lakh)					
Asset	Details	2015-16	2016-17	2017-18	2018-19
Asset-I	HVDC transmission line (length: 1753.56 km)	534.10	1323.94	1367.78	1413.37
	One Pole of 1500 MW of Bi-pole HVDC Station	397.18	1033.50	1119.75	1212.75
	Total	931.29	2357.44	2487.53	2626.12
Asset-II	LILO of D/C 400 kV Ranganadi-Balipara transmission line at B-Chariali (length: 24.77 km)	7.44	18.70	19.32	19.96
	LILO of D/C 400 kV Ranganadi-Balipara transmission line at B-Chariali (length: 1.16 km)	0.98	2.31	2.38	2.46
	4 Nos. 400 kV bays for LILO of 400 kV Ranganadi-Balipara CKT-I and II transmission line at B-Chariali	106.79	257.48	266.04	274.84
	Total	115.21	278.49	287.74	297.27
Asset-III	LILO of 400 kV Ranganadi-Balipara CKT-II transmission line at B-Chariali (line length: 49.54 km)	4.39	10.70	11.05	11.42
	LILO of 400 kV Ranganadi-Balipara CKT-II transmission line at B-Chariali (line length: 2.316 km)	0.94	2.31	2.38	2.46
	2 Nos. of 400 kV bays at for LILO of 400 kV Ranganadi-Balipara CKT-II transmission line at B-Chariali	52.72	128.74	133.02	137.42
	Total	58.05	141.75	146.45	151.30
Asset-IV	132 kV D/C B-Chariali (PG)-B-Chariali (AEGCL) transmission line (line length: 12.931 km)	2.02	4.19	4.32	4.47
	2 Nos. 132 kV Bays at B-Chariali (AEGCL) Sub-station	62.29	128.72	133.00	137.44
	Total	64.32	132.91	137.32	141.91
Asset-V	1 No. 400 kV ICT Bay	16.92	64.37	66.51	68.71
	1 No. 132 kV ICT Bay	8.45	32.18	33.25	34.36
	Total	25.36	96.55	99.76	103.37
Asset-VI	110/132 kV Earth Electrode Line (For both Biswanath Chariali and Agra Terminal)	-	620.11	1145.05	1238.84
	±800 kV HVDC Terminal at Biswanath Chariali and Agra	-	620.11	1145.05	1238.84
	Total	-	620.11	1145.05	1238.84



Interest on Working Capital (“IWC”)

63. As per the 2014 Tariff Regulations the components of the working capital and the interest thereon are discussed hereinafter:-

a) **Receivables**

The receivables have been worked out on the basis of 2 months' of annual fixed cost as worked out above.

b) **Rate of interest on working capital**

As per Regulation 28 (3) of the 2014 Tariff Regulations, SBI Base Rate as on first April of COD year Plus 350 Bps has been considered as the rate of interest on working capital. We have considered 13.50% and 12.80% for Asset-I to Asset-V and Asset-VI respectively as rate(s) of interest for calculating interest on working capital.

c) **Maintenance spares**

Maintenance spares have been worked out based on 15% of Operation and Maintenance expenses specified in Regulation 28.

d) **O & M Expenses**

O&M expenses have been considered for one month of the O&M expenses.

64. The interest on working capital allowed for the instant assets is shown in the table given below:-

	(₹ in lakh)			
Asset-I	2015-16 (Pro-rata)	2016-17	2017-18	2018-19 (Pro-rata)
Maintenance Spares	335.45	353.62	373.13	393.92
O&M Expenses	186.36	196.45	207.29	218.84
Receivables	18562.88	18861.81	19029.01	19010.55



Total	19084.69	19411.88	19609.43	19623.31
Interest	1072.93	2620.60	2647.27	2308.96

(₹ in lakh)

Asset-II	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	40.43	41.77	43.16	44.59
O&M Expenses	22.46	23.21	23.98	24.77
Receivables	113.40	119.12	121.15	122.79
Total	176.30	184.10	188.29	192.15
Interest	10.17	24.85	25.42	25.94

(₹ in lakh)

Asset-III	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	20.24	21.26	21.97	22.70
O&M Expenses	11.25	11.81	12.20	12.61
Receivables	232.94	245.51	247.23	246.53
Total	264.43	278.58	281.40	281.83
Interest	15.36	37.61	37.99	38.05

(₹ in lakh)

Asset-IV	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	19.24	19.94	20.60	21.29
O&M Expenses	10.69	11.08	11.44	11.83
Receivables	98.57	104.09	106.91	108.20
Total	128.51	135.10	138.95	141.31
Interest	8.70	18.24	18.76	19.08

(₹ in lakh)

Asset-V	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	14.02	14.48	14.96	15.46
O&M Expenses	7.79	8.05	8.31	8.59
Receivables	89.78	93.69	94.55	96.54
Total	111.58	116.22	117.83	120.59
Interest	4.29	15.69	15.91	16.28

(₹ in lakh)

Asset-VI	2016-17 (Pro-rata)	2017-18	2018-19 (Pro-rata)
Maintenance Spares	160.91	171.76	186.34
O&M Expenses	89.39	95.42	103.52
Receivables	4248.44	4515.70	4660.37
Total	4498.74	4782.88	4950.23
Interest	332.88	612.21	552.26



Pro-rata IWC from 14.2.2019 to 31.3.2019

(₹ in lakh)

Particulars	Asset-I	Asset-VI
	2018-19 (Pro-rata)	2018-19 (Pro-rata)
Maintenance Spares	393.92	186.34
O&M Expenses	218.84	103.52
Receivables	12509.20	4246.37
Total	13121.97	4536.22
Interest	222.64	72.98

Annual Fixed Cost

65. In view of the above, the Annual Fixed Cost being allowed for the instant assets are summarized hereunder:-

(₹ in lakh)

Asset-I	2015-16 (Pro-rata)	2016-17	2017-18	2018-19 (Pro-rata)
Depreciation	17612.08	43476.26	44551.23	39394.49
Interest on Loan	13542.27	32044.31	30973.38	25771.17
Return on Equity	13223.20	32672.24	33514.62	29652.33
Interest on Working Capital	1072.93	2620.60	2647.27	2308.96
O & M Expenses	931.29	2357.44	2487.53	2288.89
Total	46381.77	113170.84	114174.04	99415.83

(₹ in lakh)

Asset-II	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation	49.54	126.64	131.67	135.87
Interest on Loan	76.00	183.27	176.77	169.14
Return on Equity	39.88	101.48	105.32	108.51
Interest on Working Capital	10.17	24.85	25.42	25.94
O & M Expenses	115.21	278.49	287.74	297.26
Total	290.81	714.74	726.91	736.73

(₹ in lakh)

Asset-III	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation	164.16	413.03	428.86	440.05
Interest on Loan	238.56	566.45	543.99	515.31
Return on Equity	125.06	314.22	326.07	334.46
Interest on Working Capital	15.36	37.61	37.99	38.05
O & M Expenses	58.05	141.74	146.45	151.30
Total	601.18	1473.05	1483.36	1479.16



(₹ in lakh)

Asset-IV	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation	66.22	144.65	153.71	159.84
Interest on Loan	104.30	213.52	209.57	201.60
Return on Equity	52.99	115.20	122.10	126.76
Interest on Working Capital	8.70	18.24	18.76	19.08
O & M Expenses	64.32	132.91	137.32	141.91
Total	296.53	624.52	641.45	649.19

(₹ in lakh)

Asset-V	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation	37.67	141.07	145.88	152.80
Interest on Loan	54.86	196.41	189.48	185.33
Return on Equity	30.03	112.44	116.26	121.78
Interest on Working Capital	4.29	15.69	15.91	16.28
O & M Expenses	26.63	96.55	99.76	103.07
Total	153.48	562.15	567.29	579.26

(₹ in lakh)

Asset-VI	2016-17 (Pro-rata)	2017-18	2018-19 (Pro-rata)
Depreciation	6352.37	11645.61	10478.15
Interest on Loan	2524.54	4683.64	4141.43
Return on Equity	4905.79	9007.71	8116.90
Interest on Working Capital	332.88	612.21	552.26
O & M Expenses	620.11	1145.05	1082.71
Total	14735.68	27094.23	24371.46

Pro-rata AFC from 14.2.2019 to 31.3.2019

(₹ in lakh)

Particulars	Asset-I	Asset-VI
	2018-19 (Pro-rata)	2018-19 (Pro-rata)
Depreciation	3950.32	1405.53
Interest on Loan	622.96	385.08
Return on Equity	4307.18	1182.46
Interest on Working Capital	222.64	72.98
O & M Expenses	330.06	156.13
Total	9433.17	3202.18



Filing fee and the publication expenses

66. The Respondents has sought reimbursement of fee paid by it for filing the petition and publication expenses. BSPHCL and BRPL have submitted that the Petitioner's prayer for refund of the filing fees may not be approved. We have considered the submissions of the Respondents and the Petitioner. The Respondents is entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

License fee and RLDC Fees and Charges

67. The Petitioner has requested to allow the Petitioner to bill and recover License fee and RLDC fees and charges, separately from the Respondents. The Petitioner is entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (2) (b) and (2) (a) respectively of Regulation 52 of the 2014 Tariff Regulations.

Goods and Services Tax

68. The Petitioner has prayed for reimbursement of Service Tax/GST, if Service Tax/GST is withdrawn from the negative list at any time in future, on account of proposed implementation of GST. GST is not levied on transmission service at present and we are of the view that Petitioner's prayer is premature.

Sharing of Transmission Charges

69. The transmission charges, as provided in Regulation 43 of the 2014 Tariff Regulations, allowed for the instant transmission assets shall be shared and



recovered from the beneficiaries and long term transmission customers in accordance with the Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010 as amended from time to time.

70. This order disposes of Petition No. 363/TT/2018.

sd/-
(I. S. Jha)
Member

sd/-
(Dr. M. K. Iyer)
Member

sd/-
(P.K. Pujari)
Chairperson

