

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 184/TT/2016

Coram:

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

Date of Order : 15.12.2017

In the matter of:

Determination of transmission tariff for \pm 800 kV Biswanath Chariali-Agra HVDC POLE-II (1500 MW HVDC Terminal at Biswanath Chariali and Agra) alongwith Earth Electrode line and Earth Electrode Station for both Biswanath Chariali and Agra from anticipated COD 1.9.2016 to 31.3.2019 under the transmission system associated with "North East-Northern/Western Inter Connector-I Project.

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-110 002
 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,
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, TS Transco, 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,
Government 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
Jhkarkhand
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 the petitioner:

Shri V.P. Rastogi, PGCIL
Shri Y.K. Seghal, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri Rakesh Kumar, PGCIL
Shri Rakesh Prasad, PGCIL
Shri S.S. Raju, PGCIL
Shri Jasbir Singh, PGCIL
Shri Vivek Kumar Singh, PGCIL
Shri M.M, Mandal, PGCIL
Shri K.K. Jain, PGCIL
Mrs. Manju Gupta, PGCIL

For the Respondents:

Shri S.K. Agarwal, Advocate for Rajasthan Discoms
Dr. A.P. Sinha, Advocate for Rajasthan Discoms
Shri Abhinav Anand, Advocate for Rajasthan Discoms
Shri Shashi Kumar Jain, Rajasthan Discoms
Shri Tarun Ahuja, Rajasthan Discoms
Shri R.B. Sharma, Advocate, BRPL
Shri Manish Garg, BYPL
Shri Rajeev Kumar Gupta, MPPMCL

ORDER

The petitioner, Power Grid Corporation of India Limited (PGCIL) has filed the instant petition for determination of transmission tariff for \pm 800 kV Biswanath Chariali (BNC)-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 assets”) under the transmission system associated with "North East-Northern/Western Interconnector-I Project” (hereinafter referred to “transmission project”) from the anticipated date of commercial operation of the asset, i.e. 1.9.2016 to 31.3.2019 under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”).

Background

2. The petitioner has been entrusted with the implementation of Transmission System associated with North East-Northern/Western Interconnector-I Project. The Investment approval (IA) of the project was accorded by the petitioner’s Board of Directors vide Memorandum No. C/CP/NER-NR.WR Intr-I/97 dated 27.2.2009 at an estimated cost of ₹11130.19 crore including IDC of ₹1066.05 crore (based on 4th quarter, 2008 price level). The scope of the scheme was discussed and agreed with NR constituents in 18th SCM held on 6.6.2005, with WR constituents in the 26th SCM held on 23.2.2007 and with NER constituents in the SCM held on 22.2.2005. The project was also discussed in a meeting on 6.12.2005, held under the chairmanship of Secretary (Power), MoP, wherein representative from CEA was also present. The RCE was accorded by Board of Directors in 323rd meeting held on 30.11.2015, as per extract submitted by the petitioner alongwith the petition, at an estimated cost of ₹13762.71 crore, including IDC of ₹1747.32 crore (based on April, 2015 price level). The revised scope of work broadly includes:-

Transmission Lines:

- **Part-A: North-East- Northern/Western Interconnector-I includes**
 - (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 includes**
 - (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 includes**
 - (i) Lower Subansiri - Biswanath Chariali (Pooling Point) - 2 nos. 400 kV D/C lines with twin Lapwing conductor

Sub-stations:

- **Part-A: North East-Northern/Western Interconnector-I includes**
 - (i) Establishment of 400/132 kV Pooling Station at Biswanath Chariali with 2 x 200 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 Sub-stations by 4 x 105 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 of 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:-

Bus Reactors

Sl. No.	Sub-station	Bus Reactor
1	Biswanath Chariali	2 x 80 MVAR
2	Bongaigaon	1 x 80 MVAR
3	Balipara	1 x 80 MVAR
4	Lower Subansiri	1 x 80 MVAR*
5	Kameng	1 x 80 MVAR*

*These reactors would be a part of generation switchyard.

Line Reactors

Sl. No.	Transmission Line	Line Reactor
1	L. Subansiri-Biswanath Chariali 400 kV 2XD/C Line	4 x 63 MVAR*
2	Balipara-Bongaigaon 400 kV D/C Line (Quad Moose)	4 x 63 MVAR
3	Balipara-Biswanath Chariali 400 kV D/C line resulting from LILO of Ranganadi-Balipara 400 kV D/C line at Biswanath Chariali	Existing 1 x 50 MVAR Fixed line reactor in each circuit at Balipara end to be made switchable at the present location itself.

*Switchable Line Reactors

3. The petitioner initially filed the petition based on the anticipated date of commercial operation of \pm 800 kV BNC-Agra HVDC Pole-II (1500 MW HVDC Terminal at BNC and Agra) along with Earth Electrode line and Earth Electrode Station for both BNC and Agra as 1.9.2016. However, the petitioner vide affidavit dated 15.11.2016 submitted that the actual COD of the instant assets was 2.9.2016. The AFC was allowed for the instant asset for the years 2016-17 and 2017-18 vide order dated 27.12.2016 under Regulation 7(7) of the 2014 Tariff Regulations.

4. The petitioner has claimed ₹14747.25 lakh, ₹27349.94 lakh and ₹27769.04 lakh as transmission charges for the years 2016-17, 2017-18 and 2018-19 respectively, vide affidavit dated 8.12.2016.

5. The petitioner also claimed transmission tariff for the HVDC portion \pm 800 kV HVDC Biswanath Chariali-Agra Part-I (155 MW HVDC terminal at Biswanath Chariali



and Agra each along with \pm 800 kV Hexa Lapwing transmission line) and AC Portion of the instant transmission project in Petition No. 67/TT/2015. The Commission in order dated 8.1.2016 in Petition No. 67/TT/2015, while granting AFC under Regulation 7(7) of the 2014 Tariff Regulations, held that the transmission assets are of strategic and national importance and hence the transmission charges of the HVDC portion should be shared by all the DICs in the country. The relevant portion the order is as under:-

“26. In view of the process of planning, development and execution of the transmission system as discussed hereinabove, we are of the view that the subject transmission systems are of strategic and national importance and are in the long term interest of the economy and consumers of the country. The \pm 800 kV Biswanath Chariali-Agra HVDC link is the first of its kind in India and is passing through the “Chicken Neck” area. This HVDC asset once created will serve multiple purpose of evacuating hydro potential of North East, Sikkim and Bhutan to the rest of the country and would also carry power from Agra to Biswanath Charaiali during lean hydro season in NER, thereby serving needs of North East Region as well. In addition to this, the link is serving very important role of integrating the entire Indian Electrical Grid through a robust link. This asset is a unique asset due to its location and strategic importance. This link is a strategically important and vital connection for harnessing the present and anticipated exploitation and optimal utilization of hydro, thermal and renewable energy resources in the country. The strategic importance of the line is established by the fact that a secure and strong linkage for the North-Eastern Region and the rest of the country is now firmly established. Pertinently, the extremely narrow “Chicken Neck” which is 18 km X 22 km has been optimally utilized solving any future right of way issues in this critical, sensitive and vital area. Therefore, the setting up of such a powerful link is not only important but infuses a high degree of confidence, certainty and assurance for development of hydro power potential in North-East Region of the country, underlining the fact that no hydel development will have to face bottling up of power or backing down on account of transmission constraints.

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.”

6. The Commission further observed that the capital cost of the assets covered in the instant project are huge and the cost should be funded from the PSDF and directed the petitioner to approach the monitoring committee of the PSDF for assistance in the form of one time grant from the PSDF and the Ministry of power. The relevant portion of the said order dated 8.1.2016 is extracted hereunder:-

“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 petitioner approached the MOP seeking grant of ₹578800 lakh from PSDF. Ministry of Power has sanctioned, vide letter dated 10.3.2017, an amount of ₹288900 lakh as grant from the PSDF and the petitioner has been directed to seek ₹2889 crore from National Clean Energy Fund (NCEF). It may take some more time for the petitioner to receive the grant already sanctioned. The Commission held in the order dated 31.8.2017 in Petition No.67/TT/2015 that final tariff should be approved after the amount sanctioned is received by the petitioner. Accordingly, the final tariff was not granted in Petition No.67/TT/2015 and only the capital cost was determined and the petitioner was



directed to approach the Commission after the receipt of the grant. The relevant portions of the order dated 31.8.2017 in Petition No. 67/TT/2015 is extracted hereunder:-

“18. The petitioner is yet to receive the grant sanctioned under the PSDF and it appears that it may take some more time before the sanctioned grant of ₹2889 crore is disbursed to the petitioner. Further, the petitioner’s proposal for grant of ₹2889 crore from NCEF has not been sanctioned. We are of the view that the final tariff should be allowed once the grant sanctioned is received by the petitioner and grant of final tariff on the basis of assumptions at this stage may necessitate further revision in the tariff. Hence, we are not inclined to allow final tariff for the instant assets at this stage. The petitioner is directed to pursue the matter with the MoP for disbursement of the grant sanctioned under the PSDF and sanction of grant under NCEF. The petitioner shall inform the Commission on receipt of the grant and thereafter final tariff will be determined for the instant assets.”

“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.”

8. We understand that the petitioner is yet to receive the amount that has already been sanctioned under the PSDF. We are of the view that final tariff for the instant assets should be determined after the petitioner has received the sanctioned grant. Accordingly, the petitioner shall continue to recover the AFC granted vide order dated 27.12.2016 for the instant assets. The capital cost of the instant assets is determined in the present order and the same will be revised after receipt of the grant by the petitioner.

9. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act, 2003. The petitioner has served the petition on the respondents. Uttar Pradesh Power Corporation Limited (Respondent No.12), BSES Rajdhani Power Limited



(Respondent No. 22), Tata Power Delhi Distribution Limited (Respondent No. 23), Madhya Pradesh Power Management Company Limited (Respondent No. 25) and Kerala State Electricity Board (Respondent No. 35) have filed their reply to the petition.

10. The abstract of the replies filed by the respondents and the clarifications given by the petitioner are as under:-

- a) Uttar Pradesh Power Corporation Limited (UPPCL) in its reply vide affidavit dated 17.10.2016 has submitted that 90% of the tariff may be allowed from the date of actual commercial operation of the instant assets, subject to the condition that any grant/assistance received from Government of India should be adjusted to reduce the capital cost of assets and the transmission charges of HVDC line, for power flow from NER to NR and WR and should be shared by NR and WR at the rate of 50% by each region and for power flow back to NER on the HVDC line, 100% of the transmission charges should be borne by NER. The petitioner in its rejoinder dated 7.12.2016 submitted that RCE of the project was approved by the Board of Directors of the petitioner on 9.12.2015 and the asset was commissioned on 2.9.2016. The petitioner has further submitted that UPPCL has accepted the principles laid down by the Commission in the Order dated 8.1.2016 and hence the said proposal should be applied at the time of final determination of tariff. The petitioner has further submitted that it is actively making efforts to obtain funding from PSDF and NCEF apart from other avenues of assistance from the Government of India. As regards the sharing of transmission charges, the petitioner submitted that it shall be as per the sharing mechanism decided by the Commission.
- b) BSES Rajadhani Power Limited (BRPL) in its reply vide affidavit dated 3.11.2016 has submitted that there is cost over-run of 26% and the same is



very high. No details have been given justifying the cost over-run. BRPL has further submitted that the petitioner be directed to place on record DPR, CPM Analysis, PERT Chart and Bar Chart. The time over-run of 36 months may not be allowed as the same is within the ambit of controllable factors Declaration of commissioning of Pole I on 1.11.2015 with time over-run and cost over-run was based on considerations only to sub-serve the commercial interests of the petitioner. The petitioner in its rejoinder dated 13.12.2016 has submitted that there is no cost over-run as per RCE. Reasons of cost over-run are attributable to inflationary trends, increase in the cost of land and site preparation. The petitioner has submitted that time over-run is mainly due to delay in land acquisition at BNC which took around 5 years despite the fact that process of land acquisition was initiated well before the Investment Approval.

- c) Tata Power Delhi Distribution Limited (TPDDL) has submitted vide affidavit dated 28.12.2016 stating that CTU is responsible for co-ordination and planning as well as for development of the Inter-State Transmission System (ISTS). The 3000 MW terminal at Biswanath is essentially for evacuation of power from Lower Subhansiri HEP and Kameng HEP. The petitioner is aware of the fact that the work at 2000 MW Lower Subhansiri HEP had been stopped due to public agitation some time in 2008 and that the same is still in a limbo. This shows lapse of the petitioner and lack of co-ordination in HVDC terminal development at Biswanath with NHPC Limited. The instant petition for determination of tariff is infructuous in view of the fact that the main evacuation line for Lower Subhansri HEP to HVDC bi-pole and terminals has not yet been constructed and that the work progress of Lower Subhansri HEP in itself is under uncertainty. The petitioner in its rejoinder dated



12.4.2017 has submitted that instant transmission asset was conceived in 2003 wherein CEA suggested for connecting the NER by constructing the HVDC bi-pole from NER to NR with capacity of 3500 MW to 4000 MW.

- d) M.P. Power Management Company Limited (MPPMCL) in its reply dated 28.11.2016 has submitted that the asset was commissioned after a lapse of more than 37 months of SCOD. The capital cost on account of cost variation corresponding to time over-run is not allowable. The petitioner has already been granted 62.75% provisional tariff and PSDF has also allocated 50% of the claimed amount to the petitioner. Resultantly there is no financial crunch on the petitioner and as such unnecessary financial burden may not be passed on to the beneficiaries. The petitioner in its rejoinder dated 12.4.2017 has emphasized on the need of grant for tariff upto 90% of the Annual Fixed Charges claimed in terms of provisions 7(7) (i) of the 2014 Tariff Regulations.
- e) Kerala State Electricity Board Limited (KSEBL) in its reply filed vide affidavit dated 22.11.2016 has submitted that beneficiaries of the project are NER, ER, WR and NR. Southern Region is not a beneficiary and it was not a party to the planning process of the subject transmission scheme and it was not consulted at any stage of the discussions as part of planning and implementation of the project. KSEB has further submitted that there would not be any benefit on account of COD of this line to the SR utilities as all the transmission systems interconnecting New Grid and SR which are under construction are fully booked under LTA. Hence, the subject HVDC link would not bring any additional benefit to SR constituents. KSEB has submitted that the transmission charges may be apportioned among the concerned generators as per 2014 Tariff Regulations.

Date of Commercial Operation (CoD)

11. The petitioner had initially filed the instant petition on the basis of anticipated COD of 1.9.2016. Subsequently, vide affidavit dated 15.11.2016, the petitioner has submitted that the actual COD of the instant assets was 2.9.2016. The petitioner has also submitted the certificates issued by CEA and RLDC in this regard.

12. BRPL in its reply vide affidavit dated 3.11.2016 and further in the course of the hearing on 13.4.2017 submitted that both the poles of ± 800 kV HVDC are on the same tower. Pole-I of ± 800 kV HVDC line covered in Petition No. 67/TT/2015 was commissioned on 1.11.2015 and Pole II covered in the instant petition was commissioned in July, 2016. Stringing of Pole II was done during November, 2015 to July, 2016. As such, Pole-I could not have been commissioned on 1.11.2015 and utility of commissioning of Pole I is not justified. Soon after the COD of Pole-I there should have been shut down so as to complete the remaining stringing of Pole-II. Declaration of commissioning of Pole I on 1.11.2015 with time over-run and cost over-run was based on considerations only to sub-serve the commercial interests of the petitioner. Utility of commissioning of Pole-I of ± 800 kV HVDC line on 1.11.2015 can be ascertained by evaluation of weekly data of the power transmitted on Pole I from 1.11.2015 till July, 2016. Further, no details of the Communication System have been furnished in the tariff filing forms relating to Transmission and Communication System.

13. The petitioner in its rejoinder dated 13.12.2016 on the issue of configuration of Pole I and II submitted that during the hearing held on 13.4.2017 it was clarified that the stringing of the line was done as a part of 1500 MW Pole-I. For HVDC, return path is required for power flow, power was to flow from one pole, strings and return path was given by the second pole of 1500 MW line because of non-readiness of the Earth Electrode. The HVDC Pole-II is only a terminal, it is not a line and only ground electrode

stringing is required. Once Pole-I and II are in place, the return path is given through ground electrode. In case of non-availability of one circuit of \pm 800 kV transmission lines, the Earth Electrode can be used as unipolar metallic return. The petitioner, on the issue of Communication System, has further submitted that there are 24 fibers, out of which 6 are being used by the petitioner for system operation and ULDC purposes. In case balance fibers are used by the petitioner, their cost shall be shared as per the prevailing Regulations.

14. We have considered the submissions made by the petitioner and BRPL and the certificates issued by RLDC and CEA. Keeping in mind the submissions of the petitioner and taking into consideration the certificates issued by the CEA and RLDC, we approve the date of commercial operation of the instant asset as 2.9.2016.

15. The petitioner has not furnished certificate of CMD/MD/CEO of the Company as mandated under Regulation 6.3(A)(4)(vi) of the Indian Electricity Grid Code, 2010. The petitioner is directed to submit the same at the time of filing the truing up petition.

Time over-run:

16. As per the Investment Approval dated 27.2.2009, the schedule completion is within 54 months for assets under Part-A and 48 months for Parts B and C from the date of approval by Board of Directors. The instant assets are covered in Part-A of the transmission project and accordingly were scheduled to be commissioned by 1.9.2013. However, the instant assets were put under commercial operation on 2.9.2016. Thus, there is a time over-run of 36 months.

17. The time over-run in case of execution of the Pole-I of the HVDC system and some part of the AC portion of the instant transmission project, covered in Petition No.67/TT/2015, ranging from 25 months to 27 months and 18 days, i.e. upto 19.12.2015



has already been condoned by the Commission in order dated 31.8.2017 in Petition No.67/TT/2015. The relevant portion of the said order is extracted hereunder:-

“32. We have considered the submissions of the Petitioner and Respondents. The Petitioner has explained the reasons for time over-run (a) in respect of +/- 800 kV HVDC terminals at Biswanath Chariyali-Agra and (b) the time over-run in respect of +/- 800 kV HVDC Biswanath Chariyali-Agra Transmission Line. In respect of +/- 800 kV HVDC Biswanath Chariyali-Agra Transmission Line, the reasons for time over-run are (a) delay in obtaining forest clearance, delay due to route diversion, violence in Kokrajhar-Bodoland Territorial Autonomous District, and stoppage of work by land owners and various anti-dam groups like KRS and AASU.

33. It is noticed that the Petitioner was required to obtain the forest clearance from 16 sections in respect of +/- 800 kV HVDC Biswanath Chariyali-Agra transmission line. The Petitioner had submitted the forest proposal for Biswanath Chariyali line on 7.5.2007 and thereafter forest proposals have been submitted in the year 2009, 2010 and 2011 for the remaining sections of the transmission lines. It is further noted that an area of 22.55 Ha of land was involved in Chariyali section for which the Petitioner could obtain the approval letter from forest authorities on 26.10.2012 and 14.4.2014. The forest approval in other sections was obtained in the year 2001, 2012, 2013 and 2014. The last forest approval was obtained for Gorakhpur-Firozabad on 15.12.2014. Accordingly, the forest clearance for the entire Biswanath Chariyali-Agra transmission line was obtained on 15.12.2014. The entire forest clearance took around 5 years and 10 months. As per the Forest (Conservation) Amendment Rules, 2004 notified by MoEF on 3.2.2004, the timeline for forest approval after submission of proposal is 210 days by the State Government and 90 days by the Forest Advisory Committee of Central Government, resulting in processing time of 300 days. As against the statutory period of 300 days for processing and obtaining the forest clearance, the forest authorities have taken 2130 days for grant of forest clearance. This period is beyond the control of the Petitioner and the Petitioner cannot be held responsible for the delay. However, the Petitioner has expedited the work and completed the transmission line only with a time over-run of 26 months. In our view, had the Petitioner obtained forest clearance within 300 days of its making the application as statutorily provided, the Petitioner would have completed the transmission line as per the timeline given in the Investment Approval. However, on account of delay in forest clearance which is beyond the control of the Petitioner, the COD of the assets were delayed. Accordingly, the entire period of time over-run in respect of Asset 1 is condoned. Since the other reason for time over-run such as riots in Kokrajhar-Bodoland Territorial Autonomous District, frequent stoppage of work by farmers/anti-dam groups, the said period ran parallel to the period spent for obtaining the forest clearance and accordingly, subsumed in the time for obtaining forest clearance. It is also noticed that there are assets like bays and ICTs which are part of the transmission systems covered under Petition No. 259/TT/2015 and the Commission after considering the reasons for time over-run has condoned the delay. Since the assets covered under the present petition are connected to the assets covered under Petition No. 259/TT/2015 and could not have been put to commercial operation unless the assets covered under Petition No. 259/TT/2015 were ready for COD and the time over-run in case of these assets have been condoned by the Commission, there is a strong case in favour of the assets covered under the present petition for condonation of delay. Accordingly, taking into account all these factors, we are of the view that the time over-run in the present case is beyond the control of the Petitioner and is condoned.

34. Similarly, in respect of AC portion of the assets covered in the instant petition, the petitioner has submitted that the main reasons for the time over-run are on account of delay in forest clearance, delay in land acquisition, law & order situation and RoW issues. The petitioner has placed on record all the correspondences made by it with different institutions to mitigate the issues. We have perused the documents placed on record by the petitioner. As discussed above, it is observed that the petitioner had submitted



proposal for forest clearance on 7.5.2007 for land for HVDC Sub-station at Biswanath Chariyali, however, final approval in this regard was issued on 14.4.2014. The entire process of forest clearance took around 5 years and 2 months. As noted above, the forest clearance has to be granted within 300 days. However, in the instant case it took 1897 days from the date of Investment Approval. Further, the petitioner had approached State Government Authorities for land acquisition even before the Investment Approval. However, land was handed over to the petitioner on 24.3.2011 i.e. after 2 years of Investment Approval. Further, after getting land, the petitioner faced stiff resistance from the villagers because of the law and order situation at Biswanath Chariyali Sub-station and closure of boundary walls of the sub-station premise was finally completed on 5.9.2013 with the help of State Government and CRPF personnel. Since, the time over-run is due to delay in land acquisition, RoW issues and delay in getting forest clearance, we are of the view that the delay due to statutory approvals and land acquisition is beyond the control of the petitioner and hence the time over-run in case of the AC portion of the assets is also condoned.”

18. The time over-run in case of the Pole-I of the HVDC portion upto 1.11.2015 has already been condoned as stated above, the time over-run in case of Pole-II of the HVDC portion beyond 1.11.2015 is considered in the subsequent paragraphs. The petitioner has submitted that the delay in execution is mainly attributable to delay in land acquisition at BNC, RoW vis-à-vis law and order problems at sites, litigation, forest clearance, heavy monsoon, strikes and bandh, etc. The reasons given by the petitioner for the time over-run are as under:-

Delay attributable to execution of Pole-II:

- (i) The delay in execution of Pole-II is mainly due to non-readiness of the 110/132 kV Earth Electrode Line and Earth Electrode station at both Biswanath Chariyali and Agra end which were essential for operation purpose. Since the Earth Electrode line and sub-station were not ready, Pole-I including the HVDC line were commissioned in November, 2015 as the system could be operated in mono-polar metallic return mode. However, for both the poles to be in operation, ground return is essential for providing return path for the imbalance current between the two poles. Therefore, the petitioner was compelled to delay the commissioning of Pole-II matching with completion of Earth Electrode line and sub-station.



(ii) **Delay in handing over of land for Earth Electrode Station at Agra:**

- a. The proposal for land of Earth Electrode Station at Agra was submitted to the Department of Revenue on 4.6.2010. Necessary details alongwith proposal for the land use pattern were submitted on 14.12.2011. After completion of procedural formalities, notice for payment of 80% amount was issued on 27.11.2013. Further, new acquisition bill was issued by Gol based on which farmers demanded revised rates as per the new Act. The cost of the land as per demand of the District Administration was deposited by the petitioner and subsequently, ADM (LA), Agra issued interim award and possession letter to the petitioner vide letter dated 7.12.2013. Compensation as per new Act paid by the petitioner to the Revenue Authorities could not be disbursed to the affected farmers by the Agra District Administration due to non-implementation of the new Act in Uttar Pradesh. This led to severe RoW issues as farmers did not allow the petitioner and its contractor to start the work. On finalization of procedure and guidelines for disbursement of land compensation by the Administration, the affected land owners were paid compensation in October, 2014 and the petitioner got possession of land on 25.4.2015.
- b. The planned completion of Electrode Station within 20 months from the date of possession was delayed considerably due to aforesaid reasons of delay in handing over the possession of land. The petitioner with prudent and advanced planning expedited the implementation of work within 16 months so that the same may be commissioned by September, 2016.



(iii) **Delay in handing over of deforested forest land for Earth Electrode:**

- a. A deserted and deforested forest land was identified for Earth Electrode Station at Thogiabari, Biswanath Chariali and its proposal for diversion was submitted to Forest Department in 2007. The 1st stage clearance for diversion of land was approved by MoE&F in November, 2009. Subsequent to furnishing of the compliance report by the State Government, vide their letters dated 3.5.2010, 24.8.2011 and 3.8.2012, final approval was accorded by MoE&F on 26.10.2012. Despite payment of compensatory afforestation and NPA value, the land was not handed over to the petitioner. The matter of handing over of land was taken up with the State Forest Department who informed in May 2013 that the identified land had been encroached by the local people belonging to tribal settlers of Assam and forest dwellers. During this period, the petitioner was also facing severe RoW issues and problems at Biswanath Chariali site which were the highest priority for the petitioner as well as for the District Administration.
- b. After resolution of local agitation at Biswanath Chariali site in September 2013, the petitioner followed up the matter with the District Administration and the forest officials for handing over of the said land. The land was finally handed over to the petitioner on 24.4.2014. Details of events in chronological order in respect of Forest Clearance for Earth Electrode sub-station at Biswanath Chariali are as under:-



Srl. No	Date	Description
1	7.5.2007	Submitted proposal for diversion of 73.275 HA of Forest land
2	22.6.2011	Letter to Deputy Commissioner for providing certificate with regards to non-existence of ST and forest dwellers
3	26.10.2012	Letter from MoEF to Govt. of Assam
4	14.5.2013	Letter from Govt. of Assam to Upper Assam Zone
5	24.4.2014	Letter from DFO regarding approval of Forest Land

c. The forest clearance of the land was eventually accorded only on 24.4.2014 i.e. after 83 months of submission of proposal as against a nominal period of 10-14 months. For completion of Earth Electrode station by 1.9.2013, the forest clearance for land was supposed to have been received by December, 2011 but last forest clearance of land was received in April, 2014 after a delay of around 27 months.

(iv) **Right of Way issues in construction of Earth Electrode Line**

The construction work of Earth Electrode line at Biswanath Chariali started soon after receipt of 1st stage forest clearance of sub-station land. RoW problem continued mainly in Assam right from the beginning where landowners collectively stopped the work of line on a number of occasions and demanded high compensation. The petitioner approached the District Administration repeatedly for early disposal of the issues. During the period April, 2012 to September, 2013 the situation of Biswanath Chariali aggravated due to regular protests by miscreants, physical violence to the personnel of the petitioner and its contractors deputed for line work which at times resulted in police firing in retaliation to control the mob.

(v) **Violence/riot In Assam / BTAD (Bodoland Territorial Autonomous District) & other areas:**

a. During the period 21.7.2012-12.9.2014 due to frequent riots and frequent eruption of ethnic violence, communal clash in Assam/BTAD area led to



promulgation of Section 144 Cr. P.C. and due to which, working gangs left the site and transportation of material affected adversely. Working gangs, contractors' engineers and petitioner's officials were subjected to innumerable difficulties in execution of their works. Besides this, there were rampant extortion bids and warnings not to carry out the works without fulfillment of these bids that resulted in loss of valuable working time till negotiations were arrived at.

- b. In 2013 a renowned tea planter and businessman who hailed from Guwahati was killed by militants at Sotea under Sonitpur District which is situated a distance of about 20-25 km. from site. In January, 2014 an Additional Superintendent of Police was killed in Dhekiajuli PS in Sonitpur District. Despite security arrangements of the District Administration, petitioner and its contractors could not proceed with the work. After closure of the boundary wall with the help of CRPF and District Administration, the RoW problems in the line section alleviated. The site had to be closed down at times due to riots, ethnic violence and life threats to the gang members of the contractors. The petitioner had to face contractual issues due to frequent mobilization/ demobilization of labour.
- c. The construction activities and RoW issues at several locations were resolved with the intervention of District Administration during 2015-16. The RoW issues at some of the locations were resolved in July, 2016 and as such the work is expected to be completed by September, 2016. Details of the locations where the work was held up due to major RoW problems is as follows:-



Sl. No	Date	Correspondence to	Description
1	9.7.2011	Circle Officer, Naduar Revenue Circle	Obstruction in Construction work at Loc. No:9/0
2	28.7.2011	Deputy Commissioner, Sonitpur	ROW at McLeod Russel India Ltd
3	31.10.2011	Deputy Commissioner, Sonitpur	Diversion of land (36ha for electrode station and 22.55 ha for EE line)
4	7.11.2011	Circle Officer, Naduar Revenue Circle	Obstruction in Construction work at Loc. No:II/I
5	22.11.2011	Circle Officer, Naduar Revenue Circle	Obstruction in Construction work at Loc. No:6/0
6	2.3.2015	Circle Officer, Chariduar Revenue Circle	Obstruction in Construction work at Loc. No:44/0
7	16.3.2015	Officer In-charge, Chariduar Police Station	Obstruction in Construction work at Loc. No:44/0
8	18.4.2016	Deputy Commissioner, Sonitpur	ROW Issue in 1.492km stretch
9	5.5.2016	Minutes of meeting	With Addl. Chief Secretary
10	12.5.2016	Addl. Chief Secretary, Power and Soil Conservation	ROW Issues
11	13.5.2016	Circle Officer, Chariduar Revenue Circle	ROW Issues 28A-29/0
12	22.5.2015	Officer In charge, Chariduar Police Out Post	ROW Issues
13	31.5.2016	Deputy Commissioner, Sonitpur	Obstruction by landowners
14	10.6.2016	Minister of Labour, Revenue & Power	Severe ROW problem by land Owners (5.31 km)
15	14.6.2016	SP, Sonitpur	Regarding theft of line conductor
16	15.6.2016	SP, Sonitpur	Regarding theft of Sine conductor
17	16.6.2016	Deputy Commissioner, Sonitpur	Obstruction of Land Owners around 600 mtrs
18	30.6.2016	Hon'ble Minister of Labour, Employment & Power	Obstruction in the clearance of infringements along the corridor.
19	20.7.2016	Officer In charge, Chariduar PS	FIR for obstruction in executing 0.357 km

(vi) **Threats from outfit organization/deteriorated law and order situation:**

The following incidents affected the works at site:-

- a. Due to abduction of working personnel from 400 kV D/C (Quad) Balipara-Bongaigaon which is running parallel to the HVDC and Earth Electrode line, works remained affected on several occasions.
- b. One stringing gang leader was abducted by militant groups on 25.3.2011 from loc. # 63/1 of Balipara-Dolgaon section of the line.



- c. In two separate incidents, one Engineer of the pile contractor was abducted on 15.2.2013 from Tamulpur, BTAD, Assam and another Engineer was abducted on 22.12.2013 from Chirang District, Assam by militant groups.
- d. There was complete stoppage of work for the entire month of February, 2012 at Mangaldoi Section affecting nearly 50 km stretch due to threat extended by NDFB militant groups.

(vii) Extended monsoon and HFL: In 2011 and 2012, the flood level in lower Assam was very high. As a result of this, works at many locations remained disrupted for months together and material transportation also suffered.

19. BRPL, MPPMCL and KSEBL have raised the issue of time over-run of the instant asset vide their affidavits dated 3.11.2016, 24.1.2017 and 22.11.2016 respectively. The same are as under:-

(a) BRPL has submitted that the time over-run of 36 months in commissioning of the project is not justified. The petitioner has not submitted the statutory documents without which it is difficult to understand the reasons for time over-run. The petitioner should be directed to submit the statutory documents viz. Detailed Project Report, CPM Analysis and PERT Chart/ Bar chart in the support of its claim for condonation of time over-run.

(b) MPPMCL and KSEBL have submitted that delay in commissioning of Pole-I & II have common issues mainly relating to land acquisition and compensation. The delay occurred due to non-readiness of the 110/132 kV Earth Electrode Line and Earth Electrode station both Biswanth Chariali and Agra. Considerable delay occurred in handing over the land to the petitioner due to compensation issues; delay in handing over of deforested land for Earth Electrode Station Thogiabari, Biswanath Chariali and Right of Way

issues in construction of Earth Electrode line. Interim award and possession letter was issued by ADM, Agra during 2012-13. Despite compensation paid by the petitioner, possession of land was given to the petitioner on 25.4.2015 only after disbursement of compensation to the affected parties by the concerned authorities. The delay of 16 months occurred due to laxity on the part of petitioner and the same is attributable to the petitioner. Further, in case of Biswanath Chariali, though the forest approval was granted by MOE&F on 16.10.2012, the petitioner approached the District Administration for solving the encroachment issues only after September, 2013. Both MPPMCL and KSEBL have submitted that the delay occurred due to land acquisition issues and has to be treated as 'controllable factors' in terms of Regulation 12(1) of 2014 Tariff Regulations and the same are entirely attributable to the petitioner.

20. The petitioner in its rejoinder affidavits dated 13.12.2016, 12.4.2017 and 20.12.2016 to the replies of BRPL, MPPMCL and KSEBL respectively has submitted that time overrun of 36 months was mainly due to delay in land acquisition. Despite the fact that the petitioner initiated land acquisition process for BNC before the Investment Approval, it took around 5 years time. Besides this, there was delay in handing over of land for Earth Electrode station at Agra, delay in handing over of deforested forest land for Earth Electrode station at Thogiabari, RoW issues in construction of Earth Electrode Line, violence/riots in Assam/Bodoland Territorial Autonomous District and other areas which were beyond the control of the petitioner.

21. We have considered the submissions of the petitioner and respondents and have gone through the documentary evidence adduced on record to justify the



time over-run. The Investment Approval for the instant asset was granted on 27.2.2009. The petitioner submitted the proposal for diversion of land relating to forest clearance of Earth Electrode Sub-station at Biswanath Chariali in May, 2007. First stage of clearance for diversion of land was approved by MoE&F in November, 2009. Subsequent to furnishing the compliance report by the State Government vide their letters dated 3.5.2010, 24.8.2011 and 3.8.2012, the final approval was accorded by MoE&F on 26.10.2012 to Government of Assam. However, despite payment of compensatory afforestation and NPA value, the land was not handed over to the petitioner. The matter of handing over of land was taken up with the State Forest Department which in turn informed the petitioner in May, 2013 that the identified land had been encroached by the local people belonging to tribal settlers of Assam and forest dwellers. Finally, the petitioner was allowed to use 58.55 ha forest land for construction of Earth Electrode Line and Earth Electrode Station vide order dated 24.4.2014 for Assam portion i.e. after 83 months of submission of proposal. The entire forest clearance took around 6 years and 11 months. As per the Forest (Conservation) Amendment Rules, 2004 notified by MoE&F on 3.2.2004, the timeline for forest approval after submission of proposal is 210 days by the State Government and 90 days by the Forest Advisory Committee of Central Government, resulting in processing time of 300 days. As against the statutory period of 300 days for processing and obtaining the forest clearance, the Forest Authorities took more than 2500 days for grant of forest clearance. This period is beyond the control of the petitioner and the petitioner cannot be made responsible for the said delay. In spite of the delay in getting the forest clearance, the petitioner has expedited the work and completed the Earth Electrode Station and line for successful operation of \pm 800 kV HVDC Pole-II with a time over-run of 36 months. In our view, had the petitioner obtained forest



clearance within 300 days of its making the application as statutorily provided, the petitioner may have completed the Earth Electrode Station and transmission line as per the timeline given in the Investment Approval. However, on account of delay in forest clearance which is beyond the control of the petitioner, the COD of the asset was delayed.

22. As regards ROW issues faced during construction of the Earth Electrode Line, the petitioner has submitted that the construction of Earth Electrode Line can only be started after finalization of land for Earth Electrode Station. The work of transmission line held up due to non-finalization of Earth Electrode Station land. The petitioner has submitted the documents with respect to the action taken to resolve the ROW issues such as copy of FIRs filed by the petitioner with the police including the last FIR lodged on 20.7.2016. Perusal of these documents shows that there were severe ROW issues in the region and the petitioner had pursued the matter with the concerned authorities diligently so as to resolve the same.

23. The petitioner has also submitted meteorological data of South-West monsoon season for the period 2011, 2012 and 2013 alongwith various flood reports, media reports and damage reports prepared by the field offices on monthly basis of various States in the region to show that rains delayed the commissioning of the asset.

24. We have considered the submissions of the petitioner and are of the view that there was heavy rain and floods during 2011 to 2013. Over and above this, there were riots in Kokrajhar-Bodoland Territorial Autonomous District, frequent stoppage of work by farmers/anti-dam groups which attributed to time over-run and this period ran parallel to the period spent in obtaining the forest clearance and accordingly subsumed time in obtaining forest clearance.



25. After taking into consideration all the facts and circumstances as discussed above, we hold that the reasons for time over-run in the instant petition were beyond the control of the petitioner. Hence the entire period of time over-run in respect of the asset covered in the instant petition is hereby condoned.

Capital Cost

26. Clause (1) and (2) of Regulation 9 of the 2014 Tariff Regulations specify as follows:-

“(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.”

(2) The Capital Cost of a new project shall include the following:

(a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;

(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;

(c) Increase in cost in contract packages as approved by the Commission;

(d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;

(e) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;

(f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;

(g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and

(h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.

27. The details of the capital cost and the additional capital expenditure claimed by the petitioner for the instant assets as per Auditor's Certificate dated 18.11.2016, submitted vide affidavit dated 8.12.2016 are as follows:-



(₹ in lakh)					
Revised apportioned cost	Revised apportioned cost as per RCE	Capital cost on COD	Add-Cap during		Total estimated cost
			2016-17	2017-18	
194699.17	254374.87	209794.48	23318.07	9447.47	241590.02

28. The petitioner has submitted that the total apportioned approved cost (as per FR) of the \pm 800kV 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 was ₹194699.17 lakh including IEDC and IDC as per 4th quarter 2008 price level. The RCE of the project was approved by Board of Directors of petitioner on 9.12.2015. The apportioned cost as per RCE is ₹254374.87 lakh including IEDC and IDC. As against this, the estimated completion cost of the Asset based on the Auditor's certificate dated 18.11.2016 works out to ₹241590.02 lakh including IEDC and IDC. Therefore, there is no cost over-run as per RCE. However, there is cost over-run of about ₹46890.85 lakh as per approved apportioned cost (FR). The reasons submitted by the petitioner for cost variation are summarized hereunder:-

a. Biswanath Chariali-Agra \pm 800 kV, 6000 MW HVDC Bipole Line is a unique and first of its kind of project in the country. Being a Government enterprise, the petitioner has the obligation for indigenous development of manufacturer as well as adhere to Government of India guidelines. Accordingly, the petitioner has been following a well laid down procurement policy which ensures both transparency and competitiveness in the bidding process. Route of International Competitive Bidding (ICB) as well as Domestic Competitive Bidding (DCB) process have been followed to award this special mega project. Through this process, lowest possible market prices for required product/services/as per detailed designing is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may vary as compared to the cost estimate depending upon

prevailing market conditions, design and site requirements. Whereas, the estimates are prepared by the petitioner as per well defined procedures for cost estimates. The FR cost estimate is broad indicative cost, worked out generally on the basis of average unit rates of recently awarded contracts/general practice. The cost estimate of the project is on the basis of 4th Quarter, 2008 price level, where the contract date is 4th Quarter, 2009 to 3rd Quarter, 2011 price level.

b. Cost variation of ₹22143 lakh from FR (4th quarter, 2008) and supply period (December, 2015) is mainly attributable to inflationary trends prevalent during the execution of project and also market forces prevailing at the time of bidding process of various packages. The aforesaid price variation can be bifurcated into two parts i.e., one from FR to award of various contract and other from contract to final execution.

c. Regarding price variation from FR to award (March, 2009 to December, 2011), the contracts for various packages under this project were awarded to the lowest evaluated and responsive bidder, on the basis of Open Competitive Bidding. The award prices represent the lowest prices available at the time of bidding of various packages, thus capturing the price level at the bidding stage. The price variation from award to final execution is mainly on the basis of PV based on indices as per provision of respective contracts.

d. The increase of about ₹6999 lakh on account of mandatory spares procured for HVDC equipment from apportioned FR cost.

e. The cost of land and site preparation (Survey & Soil Investigation and Infrastructure) also increased by ₹3293 lakh from apportioned FR cost, the actual

land cost is as per the assessment made by concerned Government officials/ Revenue Authority of States.

f. Increase in Earth Electrode transmission line length from estimated 90 km (as per FR) (Agra end – 40 km and Biswanath Chariali end 50 km) to 111.60 km (as per actual), increases the cost by about ₹3444 lakh. The cost increase is broadly on account of increase in number of towers, pile foundation etc. Increase in number of tension tower due to actual line routing and line length, these resulted in increase of hardware fitting, earth wire, insulators etc. The civil works (excavation, concreting, revetment, benching etc.) also increased due to increase in line length, pile foundations.

g. The FR costs of individual items/materials are exclusive of taxes and duties which have been indicated under a separate head while the cost of items as per the actual expenditure is inclusive of taxes and duties. Increase of about ₹88.51 lakh is mainly on accounts of actual taxes, duties, octroi, custom duty, excise duty, etc. paid.

h. The cost of about ₹6795 lakh is on account of increase in compensation against earth electrode transmission line construction for crop, tree, forest clearance and PTCC. The variation is due to the actual assessment of crops/trees and huts encountered in line corridor by concerned Government officials of Assam/ District Revenue Authorities/Forest Department, quantity and value of which are much greater than the notional estimate.

29. BRPL has submitted that the apportioned approved cost of the project was ₹194699 lakh and the estimated completion cost was ₹246031 lakh and therefore the cost over-run is 26% which is very high. The 'Element-wise Break-up of Project Cost for



Transmission System' shows that there is cost over-run in almost all the ingredients of the transmission asset. The petitioner has not given justification of the cost over-run in most of the components of the transmission asset. However, in some components of the transmission asset justification is given casually and as such cost over-run of the project is not justified. No Auditor's Certificate for the asset of the instant petition up to the COD and the projected additional capital expenditure covered in the present petition have been filed by the petitioner in terms of Regulation 7(4) of the 2014 Tariff Regulations.

30. MPPMCL has submitted that the RCE approved on 9.12.2015 shows a considerable high increase under items such as preliminary work for transmission lines, civil work for township and spares for sub-station equipment. No documentary evidence has been submitted for the increase in preliminary works, land and site development cost. Details regarding the change in route length have not been provided for 20.6 km which has increased the cost by ₹3344 lakh. No documents have been furnished justifying the huge increase in compensation amount.

31. On the directions of the Commission, the petitioner in its affidavit dated 15.6.2017 has submitted that the variation in compensation against Earth Electrode transmission line construction for crop, tree, forest clearance and PTCC is due to actual cost incurred and as per assessment of the District, Revenue and Forest Authorities.

32. We have considered the submissions of the petitioner and the respondents. The increase in the capital cost is due to higher compensation paid towards crop, tree and PTCC and as per assessment of District, Revenue and Forest Authorities, increase in the Earth Electrode line length from 90 km to 110 km, increase in pile foundation, towers due to actual line routing and price variation at the time of award of the project from cost estimate of the project. Further, the petitioner has also submitted the Revised Cost Estimate (RCE) dated 9.12.2015. We have also perused the documents and RCE

submitted by the petitioner. As per RCE, there is no cost over-run in respect of the instant assets. Aforementioned reasons, in our view, are beyond the reasonable control of the petitioner and, therefore, capital cost as per RCE is allowed.

33. Inline with para 8 and 32 above, the capital cost mentioned at para 27 would be considered alongwith the grant for the purpose of tariff computation.

Additional Capital Expenditure

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

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

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

(ii) Works deferred for execution;

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

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

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

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

35. Clause (13) of Regulation 3 of the 2014 Tariff Regulations defines “cut-off” date as under:-

“cut-off date” means 31st March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after three years of the year of commercial operation”.

36. Therefore, the cut-off date for the instant assets is 31.3.2019.

37. The petitioner has claimed additional capital expenditure of ₹22318.07 lakh and ₹9447.47 lakh in 2016-17 and 2017-18 respectively. The additional capital expenditure claimed by



the petitioner is within the cut-off date and accordingly it is allowed under Regulation 14(1)(1) of the 2014 Tariff Regulations.

Initial Spares

38. Regulation 13 of the 2014 Tariff Regulations specifies ceiling norms for capitalization of initial spares in respect of transmission system as under:-

“13. Initial Spares

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

(d) Transmission system

(i) Transmission line-1.00%

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

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

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

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

(vi) Communication system-3.5%

Provided that:

(i) where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Commission, such norms shall apply to the exclusion of the norms specified above:

(ii) -----

(iii) Once the transmission project is commissioned, the cost of initial spares shall be restricted on the basis of plant and machinery cost corresponding to the transmission project at the time of truing up:

(iv) for the purpose of computing the cost of initial spares, plant and machinery cost shall be considered as project cost as on cut-off date excluding IDC, IEDC, Land Cost and cost of civil works. The transmission licensee shall submit the break up of head wise IDC & IEDC in its tariff application.

39. The petitioner has claimed the following initial spares for the instant asset: -

(₹ in lakh)		
Description	Total Cost (Plant & machinery cost excluding IDC, IEDC, land cost & cost of civil works for the purpose of Initial Spares)	Initial Spares
HVDC Station (Pole-II)	175639.20	6999.95
Transmission Line (Earth Electrode)	23035.65	431.67

40. The respondents BRPL, MPPMCL and KSEB have submitted that the amount claimed by the petitioner towards initial spares above the ceiling limit may be disallowed. The petitioner has submitted that the initial spares claimed against the HVDC station and the Earth Electrode lines are marginally higher than the ceiling limit. However, the overall initial spares for the project are well within the limit as specified in the 2014 Tariff Regulations. We have considered the submissions of the petitioner and respondents. The initial spares shall be worked out at the time of determining final tariff.

Sharing of Transmission Charges

41. KSEBL has submitted that SR constituents should be exempted from making the payment of transmission charges of the subject transmission asset as they were not part of the planning process of the asset. UPPCL and MPPMCL have submitted that any grant/assistance received from PSDF and NCCF or any other assistance of GOI may be applied to reduce the cost of assets. UPPCL has also submitted that for power flow from NER to NR and WR, the transmission charges may be shared in ratio of 50% each region as already agreed and as per POC mechanism and for Power flow back to NER on the concerned HVDC line 100%, charges may be shared by NER.

42. In response, the petitioner has submitted that it is making every effort to receive fund from PSDF/NCEF and other avenues for assistance from the Government of India. It is not that only a particular set of beneficiaries pay for the transmission charges developed

for them. The transmission charges of all assets are pooled and then based on PoC mechanism, the transmission charges are billed to all beneficiaries.

43. TPDDL has submitted that the transmission asset covered in the instant petition is primarily required for evacuation of power from hydro power stations such as Lower Subansiri and Kameng HEP being developed in NER. In view of the fact that these HEPs are inordinately delayed due to various reasons, this transmission link is not serving any useful purpose and would unnecessarily burden the respondents. TPDDL has further submitted that about 3000 MW power is forced to flow through this HVDC link diverting the normal power flow for underlying AC inter-Regional links between NER-ER which is unnecessary exercise to burden the respondents. TPDDL has requested to appoint an Independent Agency such as CEA or an Independent Expert to ascertain the utility of Pole-I of Biswanath-Agra in the absence of Lower Subansiri HEP or any other major projects for evacuation.

44. The petitioner in its rejoinder dated 12.4.2017 has submitted that the subject transmission asset has been developed based on the discussions and deliberations held in various meetings wherein a need for high capacity transmission infrastructure interconnecting NER was felt and details in this regard have already been filed in this petition and in Petition No. 67/TT/2015. Further, the Commission has also recognized the need of this HVDC link and has declared this HVDC link as transmission system of strategic and national importance. The petitioner has also submitted that as directed by the Commission, they have secured funding of ₹2889 crore from PSDF and are pursuing the matter in right earnest for securing the same amount from NCEF to reduce burden of transmission charges on DICs.

45. We have considered the submissions of the petitioner and respondents. The Commission while dealing with the other assets of the transmission project in Petition No.



67/TT/2015 held that these transmission assets are of strategic and national importance and hence the transmission charges should be shared by all the DICs. The relevant portion of the order dated 8.1.2016 is extracted hereunder:-

“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.

46. Since the asset covered in the instant petition is related to the assets covered in Petition No. 67/TT/2015, we reiterate our decisions in order dated 8.1.2016 and 31.8.2017 in Petition No. 67/TT/2015 and hold that the subject transmission assets are of strategic and national importance and the transmission charges shall be borne by all DICs.

47. Further, the Commission in the order dated 27.12.2016 has granted tariff in respect of asset covered in the instant petition in terms of proviso (i) of Regulation 7(7) of the 2014 Tariff Regulations after taking into account the applications made by the petitioner for grant from Power System Development Funds (PSDF) and National Clean Energy Funds (NCEF). Though the grant of ₹2889 crore from PSDF has been approved, the actual grant has not yet been received by the petitioner. The petitioner has informed that its request for grant from NCEF has been rejected. The petitioner has submitted that in the light of the above development, the tariff granted to the petitioner vide order dated 27.12.2016 is insufficient to meet its debt service obligation and O&M and other expenses. The petitioner has submitted that the Commission may consider allowing higher tariff for the instant asset as claimed in the petition. We have considered the request of the petitioner. It is pertinent to note that the Ministry of Power while sanctioning the grant from PSDF vide its letter dated 10.3.2017 had directed the petitioner to pursue its application for the balance portion of the grant from NCEF and in case the proposal is not considered by NCEF, the petitioner may again approach PSDF for funding the balance amount. Considering the fact that the sanctioned grant from PSDF has not yet been received and

the request of the petitioner for grant from NCEF has been rejected, we direct the petitioner to make an application for additional grant from PSDF. The petitioner is also directed to vigorously follow up with Ministry of Power for early release of funds sanctioned vide letter dated 10.3.2017.

48. The amount of annual fixed charges allowed in the order dated 27.12.2016 is barely sufficient to meet the debt service obligation, O&M and other expenses by the petitioner. Therefore, we consider it appropriate to allow 80% of the annual fixed charges claimed in the petition under proviso (i) of Regulation 7(7) of the 2017 Tariff Regulations. Accordingly, the following transmission charges are allowed to be recovered by the petitioner with effect from 1.12.2017 in supersession of our order dated 27.12.2016:-

(₹ in lakh)		
1.12.2017 31.3.2018	to	2018-19
7619.39		23068.54

49. The petitioner shall be entitled to recover the annual fixed charges as approved above from the DICs of all regions as per the provisions of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 as amended from time to time.

50. The petitioner shall inform the Commission on receipt of the grant from PSDF and shall file a fresh combined petition in respect of assets covered in Petition Nos. 67/TT/2015 and 184/TT/2016 within 6 weeks from the date of receipt of the grant. 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.

51. This order disposes of Petition No. 184/TT/2016.

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

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson

