

CENTRAL ELECTRICITY REGULATORY COMMISSION
4th Floor, Chanderlok Building, 36, Janpath, New Delhi- 110001
Ph: 23753942 Fax-23753923

Pet. No. 184/TT/2016

Dated: 31.5.2017

To

The Secretary,
Central Electricity Authority,
R.K.Puram,
New Delhi 110 066

Subject: Comments of CEA on determination of transmission tariff for Asset : \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 from anticipated COD 1.9.2016 to 31.3.2019 under the transmission system associated with "North East – Northern/Western Inter Connector – I Project " – Reg.

Sir,

The Commission in the ROP dated 13.4.2017 in Petition No. 184/TT/2016 filed by PGCIL has directed as follows:

"5. The Commission further directed the staff of the Commission to seek the comments of POSOCO and CEA on reply of TPDDL regarding Angular Stability between NER-NR grid (Para 12 of reply dated 28.12.2016 by TPDDL)."

2. Copy of the ROP dated 13.4.2017, copy of Petition No. 184/TT/2016 and copy of Reply of TPDDL dated 28.12.2016 are enclosed.

3. It is requested that comments on the reply of TPDDL may kindly be sent by 16.06.2017

Yours faithfully,



(T. Rout)
Chief (Law)

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 184/TT/2016

- Subject : Determination of transmission tariff for Asset : \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 from Anticipated COD 1.9.2016 to 31.3.2019 under the transmission system associated with "North East – Northern/Western Inter Connector – I Project".
- Date of Hearing : 13.4.2017
- Coram : Shri Gireesh B. Pradhan, Chairperson
Shri A. K. Singhal, Member
Shri A.S. Bakshi, Member
Dr. M. K. Iyer, Member
- Petitioner : Power Grid Corporation of India Limited (PGCIL)
- Respondents : Rajasthan Rajya Vidyut Prasaran Nigam Limited and 19 others
- Parties present : Shri Y.K. Seghal, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri S.S. Raju, PGCIL
Shri Jasbir Singh, PGCIL
Shri Vivek Kumar Singh, PGCIL
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 Rajeev Kumar Gupta, MPPMCL



Record of Proceedings

Learned counsel for the BRPL submitted as follows:-

- (a) The petitioner has not submitted the information regarding the original capital cost sanctioned by Public Investment Board (PIB). No justification has been given for revising the cost estimates by the Board of Directors of the petitioner company. The petitioner has not furnished the reasons for the cost over-run in case of all the elements of ± 800 kV HVDC Pole-II and the terminals at BNC and Agra and the earth electrodes at both the ends. Further, Auditor's certificate for the instant asset upto the CoD and the projected additional capital expenditure have not been filed.
- (b) 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. He further emphasised that the main reason for the time over-run is delay in award of contract which is attributable to the petitioner.
- (c) Pole-I of ± 800 kV HVDC line was commissioned on 1.11.2015 and Pole II in July, 2016 as per the petitioner. 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.
- (d) The petitioner has not mentioned the effective tax rate in Form 3 for each year of tariff period. Further, as the instant assets comprise of a new transmission project, the petitioner is entitled for Tax Holiday under Section 80 IA of the Income tax Act, 1961. However, the petitioner has not opted for Tax Holiday, unnecessarily burdening the beneficiaries.
- (e) As regards the optical ground wire, the petitioner has not filed the details of the Communication System in the Tariff Filing Forms related to Transmission and Communication System.
- (f) The petitioner has claimed O&M Expenses for 110/132 kV earth electrode line, as if it is a transmission line, which is essentially an earth electrode. Since, the earth electrode is part of the terminal equipment



and O&M Expenses for the terminal have already been allowed, the petitioner cannot claim the O&M Expenses twice for the same asset.

- (g) The petitioner has not filed the Inspection Report of the Electrical Inspector in respect of HVDC transmission line.
- (h) Initial Spares should be allowed as per the ceiling norms specified in the 2014 Tariff Regulations.

2. In response, the representative of the petitioner submitted that the petitioner being a Navratna Company, the FR cost and the RCE was approved by the petitioner's Board. He further submitted that stringing of Pole I and II was done simultaneously and Pole I and II were commissioned on 1.11.2015 and in July, 2016 respectively. He also submitted that the issues raised by BRPL have already been clarified in their rejoinder dated 13.12.2016.

3. The learned counsel for the Rajasthan Discoms submitted that reply to the petition will be filed soon.

4. The Commission directed the petitioner to submit that following information latest by 19.5.2017, on affidavit with an advance copy to the respondents:-

- (a) Reason for taking 6 months in testing and commissioning as against schedule of 1 month as per original schedule.
- (b) Documentary evidence for huge increase in cost in respect of preliminary work, land and site development.
- (c) PERT chart along with Critical Path Method (CPM) analysis to determine time overrun against each activity.
- (d) DPR of the project.
- (e) Power transmitted on Pole-I from 1.11.2015 till July, 2016 on weekly basis.
- (f) Documents justifying huge increase in compensation amount.
- (g) Reason for withholding payments claimed as Balance/Retention payments.
- (h) Rejoinder to reply of Tata Power Delhi Distribution Ltd., (TPDDL).



5. The Commission further directed the staff of the Commission to seek the comments of POSOCO and CEA on reply of TPDDL regarding Angular Stability between NER-NR grid (Para 12 of reply dated 28.12.2016 by TPDDL).

6. The Commission also directed the petitioner to inform all the respondents about the amount of grant allotted by PSDF for the instant transmission project with an intimation to the Commission by 12.5.2017

7. The Commission directed the petitioner to comply with the above directions within the specified timeline and if the information mentioned at para 4 above is not filed in time, the matter may be decided on the basis of the information on record.

By order of the Commission

Sd/-
(T. Rout)
Chief (Law)



PETITION NO. 184/TT/2016

IN THE MATTER OF: Approval under regulation – 86 of CERC (Conduct of Business) Regulations, 1999, and CERC (Terms And Conditions of Tariff) Regulations, 2014, for determination of Transmission Tariff for Asset \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 from anticipated DOCO 01.09.2016 to 31.03.2019 under the transmission system associated with “NORTH EAST – NORTHERN/WESTERN INTERCONNECTOR – I PROJECT”.

Power Grid Corporation of India Limited

...PETITIONER

Versus

Assam Electricity Grid Company Limited
And Others

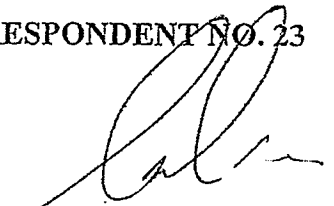
...RESPONDENTS

INDEX

S.NO.	DESCRIPTION	PAGE NO.
1.	REPLY ON BEHALF OF RESPONDENT NO. 23, TATA POWER DELHI DISTRIBUTION LIMITED ALONG WITH AFFIDAVIT	1-12
2.	VAKALATNAMA	13

RESPONDENT NO. 23

THROUGH



GAURAV GUPTA
ADVOCATE
D-293, DEFENCE COLONY,
NEW DELHI – 110024
MOB:- +91-9958-444-233

PLACE: New Delhi
DATE: 22/12/16

IN THE MATTER OF: Approval under regulation – 86 of CERC (Conduct of Business) Regulations, 1999, and CERC (Terms And Conditions of Tariff) Regulations, 2014, for determination of Transmission Tariff for Asset ± 800 kV BiswanathChariali – Agra HVDC POLE – II (1500MW HVDC Terminal at BiswanathChariali and Agra) along with Earth Electrode line and Earth Electrode Station for both BiswanathChariali and Agra from anticipated DOCO 01.09.2016 to 31.03.2019 under the transmission system associated with “NORTH EAST – NORTHERN/WESTERN INTERCONNECTOR – I PROJECT”.

Power Grid Corporation Of India Limited

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Versus

Assam Electricity Grid Company Limited
And Others

...RESPONDENTS

REPLY ON BEHALF OF RESPONDENT NO. 23, TATA POWER DELHI

DISTRIBUTION LIMITED

MOST RESPECTFULLY SHOWETH:

1. That the answering Respondent came into existence after implementation of Reform Package by GNCTD in July 2002 as a Power distribution licensee. The Respondent distributes electricity in the North and North -West area of Delhi catering to around 14.2 lac consumers.
2. That Hon'ble Commission has notified the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 which have come into force from 01.04.2014 and specifying the terms and conditions and methodology of tariff determination under Section 62 & 79 of the Electricity Act, 2003.

4. That without prejudice to the multifarious grounds and contentions available to it, by way of the present reply, the Respondent states and submits as follows:

PRELIMINARY SUBMISSIONS

1. That at the outset, Answering Respondent denies all the statements, claims, representations and averments, as made in the Petition filed by the Petitioner, which are contrary to what is stated herein. Nothing may be deemed to be admitted unless the same is specifically admitted herein but should be treated as though the same has been set out as denied and disputed specifically.
2. That the answering Respondent humbly submits before this Hon'ble Commission that the Petitioner has deliberately stated the facts in incorrect perspective and has consequently tried to mislead the Hon'ble Commission. With the view to clarify the mitigating factors related to this project and to put thing in the correct perspective, the Petitioner hereby states the correct facts related to the project.
3. As per Section 38(2) of the Electricity Act, 2003 (herein after referred to as "Act") the following responsibility is vested with the Petitioner while acting as a Central Transmission Utility (herein after referred to as "CTU"):

"Section 38: Central Transmission Utility and Functions

.....

(2) The functions of the Central Transmission Utility shall be-

relating to inter-state transmission system with –

(i) State Transmission Utilities;

(ii) Central Government;

(iii) State Governments;

(iv) generating companies;

(v) Regional Power Committees;

(vi) Authority;

(vii) licensees;

(viii) any other person notified by the Central Government in this behalf;

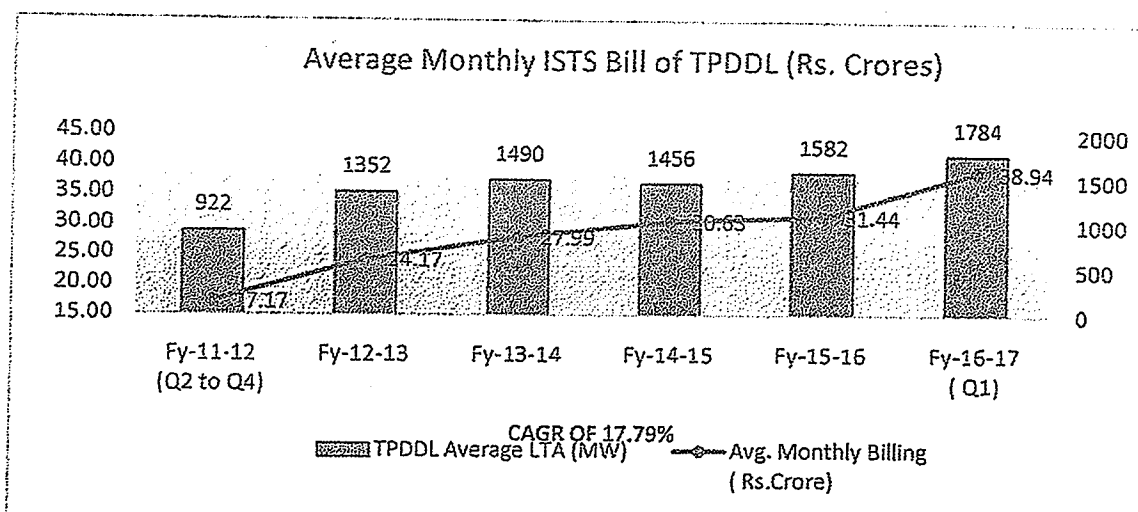
(c) to ensure development of an efficient, co-ordinated and economical system of inter-state transmission lines for smooth flow of electricity from generating stations to the load centres;

.....”

It is pertinent to mention herein that as per the Electricity Act, a CTU is responsible for the co-ordination and planning, as well as for development of the Inter-State Transmission System (herein after referred to as “ISTS”). This mandate of the statute cannot be diluted in any way, especially by quoting meetings held in the Ministry of Power (herein after referred to as “MoP”) and the Central Electricity Authority of India (herein after referred to as “CEA”). The Electricity Act specifically states that a CTU (the Petitioner in the present case) shall ensure an efficient, co-ordinated and economical ISTS. However, the subject matter of this Petition, i.e., Asset ± 800 kV BiswanathChariali – Agra HVDC POLE – II (1500MW HVDC Terminal at BiswanathChariali and

that the co-ordination and development, as envisaged under the Act, must also be in line with the Indian Electricity Grid Code Regulations (herein after referred to as "IEGC"). The compliance of the Act and the IEGC is necessary so that the Long Term Agreement (herein after referred to as "LTA") holders are not burdened with the responsibility of servicing under-utilized assets.

4. That the Petitioner is deliberately misleading this Hon'ble Commission by making incorrect averments. It is the contention of the Petitioner that transmission charges are insignificant. It is in this regard, Answering Respondent deems it to be necessary to depict the significant character of transmission charges by presenting the ISTS charges paid by the Respondent since fiscal year 2011-12 till the first quarter of fiscal year 2016-17.



It is clearly evident that the ISTS charges being already paid by Respondent running into crores, which is not an insignificant amount. In fact, it can be seen that the average monthly ISTS charges being paid by the answering Respondent have already increased from two-fold in the last five years, and

5. That in addition to the aforementioned, it is pertinent to mention herein that answering Respondent also bears the burden of ISTS losses and the State Transmission Utilities (herein after referred to as "STU") charges and losses. Also, the approximate cost of transmission charges and losses up to Respondent's boundary are in the range of Paisa 60-70 per unit as compared to weighted average power procurement cost of around Rs.4.24 per unit. Therefore, the Petitioner cannot presume that there is no concern about the increasing ISTS charges. Being a CTU, it is the statutory responsibility of the Petitioner to develop an efficient, economical and co-ordinated ISTS. From perusal of the Petition preferred by the Petitioner, it is abundantly evident that the Petitioner has failed to perform its statutory obligations.)
6. That the Petitioner, very conveniently, has omitted to mention in its Petition that in the year 2009-10, seeing the poor progress of hydro-electric projects in Arunachal Pradesh, CEA advised the Petitioner to initially develop only a 3000MW terminal at Biswanath and to Loop In Loop Out (herein after referred to as "LILO") the same High Voltage Direct Current (herein after referred to as "HVDC") line at Alipurduar in Cooch Bihar at Bhutan border. It was decided and approved in the standing committees of transmission planning that accordingly a 3000MW HVDC terminal would be set up at Alipurduar to evacuate power imported from Bhutan from *Punatsanchu-I*, *Punatsanchu-II* and Mangdechu Hydro-electric Plants (herein after referred to as "HEPs") which had been taken up for construction under bilateral agreement. These projects aggregating to about 2500MW are slated to be commissioned now in 2018-19, and the HVDC terminal is under construction.

by North Eastern Electric Power Corporation Limited (NEEPCO). The Petitioner is aware of the fact that the work at 2000MW Lower Subhansri HEP had been stopped due to public agitation around 2008 and that that project still remains in a limbo. This also discloses that lapse of the Petitioner who should have been vigilant enough and closely coordinated the HVDC terminal development at Biswanath with NHPC Limited. The HVDC terminal is not essential for the 600MW Kemeng HEP, however, the construction of the Kemeng HEP is running late.

8. That the Pole-I from Biswanath to Agra recently commissioned by Petitioner is in fact serving no purpose other than burdening the utilities like Answering Respondent and the other Respondents. It is pertinent to mention herein that about 300MW power is being forced to flow on the pole-1 by diverting the normal flow from underlying 400kV AC IR links between North East Region – East Region (herein after referred to as “NER – NR”), viz. Four (4) no. 400kV circuits between Bongaigaon and Siliguri and a 220kV double circuit line. The AC links between NER-ER normally remains under loaded. Thus, 300MW of power was being diverted from the AC links which were already under loaded, to the Pole – I. Such a step is a frivolous and unnecessary exercise to burden the Respondents.
9. That it is pertinent to mention herein that the HVDC bi-pole and terminals are primary being commissioned for evacuation from the Lower Subhansri HEP to Biswanath. However, the Petitioner has commissioned the HVDC bi-pole and terminals even before the main evacuation line from Lower Subhansiri to

yet. Moreover, the Lower Subhansri HEP in itself is in a limbo and the work has not progressed there.

10. That the 14,750MW hydro projects mentioned by the Petitioner exists on paper and no progress has been made in this regard. Not a single Independent Power Producer (herein after referred to as "IPP") project has been able to commence the civil construction work of its main plant. However, a few small projects have only been able to acquire land till now. There are serious roadblocks to land acquisition, connectivity, Power Purchase Agreements and financial closure of HEPs in Arunachal Pradesh. Petitioner No. 3 as CTU is not expected to ignore the ground reality and commission transmission assets when there is no certainty of generation projects. In fact it is most necessary to point out that in view of the fact that the generation projects are uncertain and lying in a limbo, the transmission charges claimed are unreasonable and is in fact a *mala fide* act of the Petitioner to unjustly enrich itself.

11. That any transmission link could be loosely labelled as a system strengthening link. However, the fact is that Biswanath/Alipurduar-Agra 6000MW HVDC scheme, having a common ± 800 kV DC transmission line, is for power evacuation for generation projects in Arunachal Pradesh and Bhutan. This is clearly mentioned in CEA Transmission Plan for 12th Five Year Plan. The relevant extract of CEA Plan is reproduced below:

"8.7.2 Transmission system associated with ongoing projects i.e. Lower Subansiri HEP (2000 MW) and Kameng HEP (600 MW)

Transmission system for evacuation of power from Lower Subansiri HEP and Kameng HEP in Arunachal Pradesh and hydroelectric projects in Bhutan

6000 MW HVDC Bipole line from BiswanathChariyalli to Agra. The implementation of HVDC Bipole was deferred because of delay in implementation of Lower Subansiri HEP. Now the construction of 1971 km HVDC line is in progress and construction of converter terminals at BiswanathChariyalli (3000 MW), Alipurduar (3000 MW) and Agra (6000 MW) has also been awarded. The transmission system is being implemented by POWERGRID. The estimated cost of the scheme is Rs. 11,130 crores. The scheme is expected to be commissioned matching with the commissioning of the hydro projects. The details of the transmission system are given below.

A. North East-Northern / Western Interconnector –I

- BiswanathChariyalli-Agra \pm 800 kV, 6000 MW HVDC bipole line
- Balipara- BiswanathChariyalli 400 kV D/C line
- LILO of Ranganadi-Balipara 400 kV D/C line at BiswanathChariyalli
- BiswanathChariyalli- BiswanathChariyalli (AEGCL) 132 kV D/C line
- 2x200 MVA 400/132 kV S/S at BiswanathChariyalli
- HVDC 3000 MW rectifier module at BiswanathChariyalli and 3000 MW inverter module at Agra
- 1x315 MVA 400/220 kV S/S at Agra (aug.)

B. Transmission System for immediate evacuation of power from Kameng HEP

- Kameng-Balipara 400 kV D/C line

Hence, this transmission system is for evacuating power generated in NER to the other regions of the country. However, such transmission cannot be done until the HEPs lying in a limbo are completed and actual power is generated. Until then, commission of ISTS charges will only serve as an additional burden on all the Respondents herein, including Respondent No. 23.

12. That the following statements in the Petition are misleading and hence denied

“This link would provide stability to interconnections of NER with National Grid.

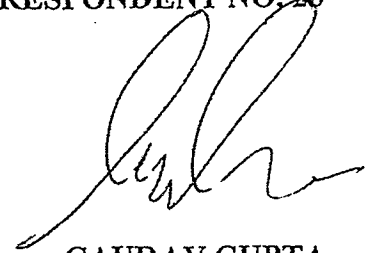
This shall reduce maximum angle spread across the NER-NR grid by 35-40 degree.”

The NER is already strongly connected to the national grid and its stability is unquestionable. There is no congestion on the NER-ER link. This can be confirmed from Central Electricity Authority. The Petitioner is simply misleading this Hon'ble Commission by emphasising the alleged strain on the Chicken-Neck Area near Silliguri to justify its claim of stability. The NER – ER connection is already firm and stable. However, it is important to note that stability was never the purpose of building such an expensive HVDC projects. Also, Power angle (δ) is a measure of stability across an AC transmission link, and as per the CF[^] planning manual the power angle (δ) between two adjacent nodes of an AC link should be less than 30 degrees. NER-NR are connected directly by an AC link and the talk of 'reducing angle spread across NER-NR' is irrelevant, unscientific and not in accordance with electromagnetic wave theory.

- (A) Dismiss the petition filed by the Petitioner for determination of Transmission Tariff for Asset \pm 800 kV BiswanathChariali – Agra HVDC POLE – II (1500MW HVDC Terminal at BiswanathCharialiand Agra) along with Earth Electrode line and Earth Electrode Station for both BiswanathChariali and Agra from anticipated DOCO 01.09.2016 to 31.03.2019 under the transmission system associated with “NORTH EAST-NORTHERN/WESTERN INTERCONNECTOR – I PROJECT”;
- (B) Direct the Petitioner to approach this Hon’ble Commission when the associated Lower Subhansiri HEP is ready for commissioning;
- (C) Appoint an independent agency such as CEA or an independent expert to ascertain the utility of Pole - I of Biswanath-Agra in absence of Lower SubhansisriHEP or any other major projects for evacuation; and
- (D) Pass such other and further orders as this Hon’ble Commission may deem fit and proper.

RESPONDENT NO. 23

THROUGH



GAURAV GUPTA
ADVOCATE
D-293, DEFENCE COLONY,
NEW DELHI – 110024
MOB:- +91-9958-444-233

PLACE: New Delhi
DATE: 28/12/16

**BEFORE
THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO.:

IN THE MATTER OF: Approval under regulation-86 of CERC (Conduct of Business) Regulations'1999 and CERC (Terms and Conditions of Tariff) Regulations '2014 for determination of Transmission Tariff for **Asset ± 800kV Biswanath Chariali-Agra HVDC POLE-II (1500MW HVDC Terminal at Biswanath Chariali and Agra) along with Earth Electrode line and Earth Electrode Station for both Biswanath Chariali and Agra** from anticipated DOCO 01.09.2016 to 31.03.2019 under the transmission system associated with "**NORTH EAST - NORTHERN/WESTERN INTERCONNECTOR - I PROJECT**".

Power Grid Corporation of India Ltd.

--- PETITIONER

Registered office: B-9, Qutab Institutional Area,
Katwaria Sarai, New Delhi. 110 016.

Corporate Centre: 'SAUDAMINI', Plot No-2,
Sector-29, Gurgaon-122 001 (Haryana).

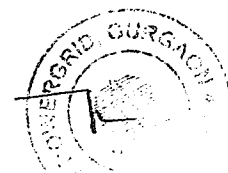
Assam Electricity Grid Company Limited
and Others

--- RESPONDENT

To
The Hon'ble Chairman and
His Companion Members of The Hon'ble CERC
The humble application filed by the Petitioner

MOST RESPECTFULLY SHOWETH

- 1.0** That, Hon'ble Commission have made CERC (Terms and Conditions of Tariff) Regulations, 2014 and issued vide notification dated. 21.02.2014. These regulations shall remain in force for a period of 5 years w.e.f. 01.04.2014, unless reviewed earlier or extended by the Hon'ble Commission.
- 2.0** The Petitioner herein, Power Grid Corporation of India Ltd. is a Government Company within the meaning of Companies Act, 1956. In exercise of powers under sub-section (1) of section 38(1) the Electricity Act 2003, the Government of India has declared the Petitioner herein as the Central Transmission Utility (CTU). The petitioner being CTU is deemed to be a transmission licensee under section 14 of the Electricity Act' 2003.



3.0 The tariff for the said transmission systems shall be determined by the Hon'ble Commission in accordance with the CERC (Terms and Conditions of Tariff) Regulations, 2014

4.0 That the instant petition covers approval of transmission tariff for **Asset ± 800kV Biswanath Chariali-Agra HVDC POLE-II (1500MW HVDC Terminal at Biswanath Chariali and Agra) along with Earth Electrode line and Earth Electrode Station for both Biswanath Chariali and Agra under NORTH EAST - NORTHERN/WESTERN INTERCONNECTOR - I PROJECT** which is anticipated to be put under commercial operation w.e.f. 01.09.2016.

5.0 PROJECT BACKGROUND

1. It is submitted that based on various discussions and deliberations in various meetings taken by Secretary (Power)/JS in ministry of Power during 2003-05 (as detailed hereunder), a need was felt for the establishment of a High Capacity Transmission infrastructure interconnecting North East Region (NER) to other Regions in view of the following -

i. In May'2003, Proposal for the establishment of Hydro Projects with total capacity of 50,000 MW identified by Government of India. [50,000 MW Hydroelectric Initiative launched by Hon'ble PM of India Shri Atal Bihari Vajpayee]

ii. About 40,000 MW of power from NER, Sikkim and Bhutan was envisaged to be evacuated through limited transmission corridor of Chicken Neck Area to Northern, Western and Southern Region.

iii. Transmission lines to transverse through difficult terrain and a very narrow patch of land of Chicken Neck Area (22 km. width X 18 km length) near Siliguri having borders of Nepal on one side & Bangladesh on the other side and largely habited.

iv. All transmission lines, railway lines, gas pipe-lines, telecommunication lines etc. have to pass through the chicken neck area.

v. About 07-08 nos. of HVDC corridors each of 5000-6000 MW capacity & 04-05 nos. of AC lines may be required with a total width of about 1.5-2 km for evacuation of total 40,000MW.

2. That in this regard several meetings were held at the Secretary and Joint Secretary level in Ministry of Power during the period 2003 - 2005. A Meeting was held by the Joint Secretary (H) in October 2003, wherein the CEA suggested that for connecting the NER, the only option would be to construct the HVDC bipole from NER to NR with the capacity of the order of 3500 to 4000MW.

A copy of the Minutes of Meeting dated 24/10/2013 in this regard is attached hereto and marked as **Annexure A**.



3. That on 03/03/2004, a meeting was held by the Secretary (Power) where it emerged that during XIth Plan around 15,000MW of power would have to flow from NER. CEA and POWERGRID were advised to evolve a comprehensive transmission scheme for NER. A copy of the Minutes of Meeting dated 03/03/2004 is attached hereto and marked as **Annexure B**.
4. That in a further meeting taken by Joint Secretary (H) in November 2004, CEA informed the need to evolve long term prospective plan for NER keeping in view the Right of Way constraint in Chicken Neck Area. A copy of the Minutes dated 02/11/2004 is attached hereto and marked as **Annexure C**.
5. That considering 50,000 MW Hydroelectric Initiative launched by Government of India & future HEPs in Bhutan, about 40,000 MW power would need to be evacuated from NER, Sikkim and Bhutan. It was decided that for evacuation of 12,000 MW power by the end of XIIth Plan, HVDC bipole line would be a desirable option and it would be prudent that the transmission line be designed at ± 800 kV level. It was further decided that POWERGRID would carry out detailed survey including satellite imaging for assessment/availability of RoW for transmission corridor in Chicken Neck Area.
6. That in the next Meeting dated 08/12/2004, held by the Secretary (Power), the Government once again emphasized the need to plan long term transmission system for NER in a comprehensive manner keeping in view Right of Way problems in Chicken Neck Area. A copy of the Minutes of Meeting dated 08/12/2004 is attached hereto and marked as **Annexure D**.
7. That at the relevant time, the CEA informed that it has evolved a tentative master plan which includes bulk transmission system through HVDC Bipole lines to NR. It was decided that the Petitioner shall carry out necessary survey to identify the requirement in Chicken Neck Area and submit a proposal for acquiring Right of Way.
8. That at the Meeting held by Secretary (Power) on 06/12/2005, it was held that during XIth Plan surplus power from NER, Sikkim and Bhutan would be about 6,000 MW. CEA informed that high capacity HVDC bipole line of 6000 MW capacity is planned from NER keeping in view the hydro potential and Row problems in Chicken Neck Area. A copy of the Minutes of Meeting dated 06/12/2005 is attached hereto and marked as **Annexure E**.
9. That in meeting taken by Secretary (Power) in Feb'2006, the survey report was presented to MoP and various options for development of corridors were deliberated and following were decided by MoP-



The Petitioner was directed to prepare DPR for "North East-Northern/Western Region Interconnector-I and the DPR was to include 4 no.s of transmission corridors in the Chicken Neck area i.e. about 24000 MW of power transfer so that the above could meet the requirement of power transfer in the medium term i.e. next 10-15 years. A copy of the Minutes of Meeting dated 22/02/2005 is attached hereto and marked as **Annexure F**.

10. That CEA prepared a Transmission Plan in March 2006. The relevant extracts from the said plan with regard to the subject transmission system are as under –

- CEA's Master plans includes high capacity ± 800 kV 6,000 MW HVDC link from Bishwanath Chariyali to Agra titled as 'inter-regional Transmission System for export of power from NER to NR/WR'
- CEA indicated this link in its note to MoP as a flagship endeavor towards quantum leap in Indian Power System.

Copies of the study of CEA report are attached hereto and marked as **Annexure G**.

11. That following deliberations on the scheme were held during the meeting taken by JS (Transmission), MoP on 6th June' 2006 and 7th Aug'2006.

- Need for transmission system for evacuation of 50,000MW power through Chicken-Neck area was re-emphasized.
- Preparation of DPR for high capacity HVDC corridor including, corridors in Chicken-Neck area to be expedited.
- Issue of high capacity margins in the initial phases was also discussed.

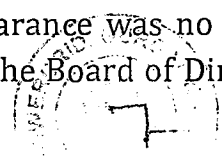
12. That the DPR was submitted to MoP in 2006.

13. That subsequently, the matter has been discussed in detail in various meetings as under –

- In QPR meeting of the Petitioner for 2nd quarter on 21/11/2006, Secretary (Power) directed that the proposal for PIB clearance may be expedited.
- In QPR meeting of the Petitioner for 3rd quarter on 13/03/2007, Secretary (Power) reviewed the status of investment approval of the project.

Copies of the QPR are attached hereto and marked as **Annexure H**.

That the note for PUBLIC INVESTMENT BOARD (PIB) was initiated by Planning Commission (Project Appraisal and Management Division) on 07th April'2008. The project was found suitable and optimal considering Right of Way and Investment proposal found to be justified. In the meantime, the Petitioner was notified as a 'Navratna' and the PIB clearance was no longer required. The Investment Approval was obtained from the Board of Directors



of the Petitioner and on 27/02/2009. Copy of the Investment Approval are attached hereto and marked as **Annexure I**.

14. That in addition to the above and practice in vogue, the subject transmission system was agreed by the constituents in the Standing Committee / RPC Meetings of NR and WR.

- **NR-** In 18th Meeting of the Standing Committee on Transmission System Planning in Northern Region held in Dalhousie on 06/06/2005, following was agreed-
 - a) NR and WR are power deficit whereas power would be available in ER and NER. Comprehensive transmission requirement had been assessed.
 - b) Considering the limited transmission corridor available in chicken-Neck area, evacuation of power from NER had to be through High capacity transmission system.
 - c) Transmission charges to be shared on regional pool basis.
 - d) Capacity margin envisaged for power transfer through short term.

Copies of the relevant extracts from the Minutes of Meetings are attached hereto and marked as **Annexure J**.

- **WR-** In 26th meeting of Standing Committee on Power System Planning in Western region which was held on 23/02/2007 at Mumbai, scheme was approved in 3 parts. Part-A as NER-NR/WR Interconnector-I a regional strengthening scheme, Part-B and Part-C associated with generation schemes.

Copies of the relevant extracts from the Minutes of Meetings held at the Western Region are attached hereto and marked as **Annexure K**.

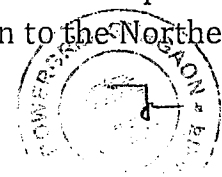
15. That the scheme was agreed in NR and WR RPC meetings and accordingly, it was part of the BPTA.

Copies of the BPTA are attached hereto and marked as **Annexure L**.

16. That the scheme was included in the National Electricity Plan for XIIth Plan period published by CEA in November 2012.

17. That the subject transmission system is being monitored by Ministry of Power and the Prime Minister's Office. It is identified in the list of projects for Pragati Meetings by PMO. Copy are attached hereto and marked as **Annexure M**.

18. That the subject transmission system is a regional scheme for strengthening of transmission network in the north eastern region and to provide for important transmission service connecting the NE Region to the Northern and Western Region.



19. That the Generator in NER (Lower Subansiri and Kameng) had earlier proposed their commissioning schedule as March'2010 and December'2010 respectively.

Copies of the minutes of meeting held on 06.12.2005 chaired by Sec (P) are attached hereto and marked as **Annexure F**.

Copies of letter dated: 31.10.2007 from NEEPCO in this regard is attached hereto and marked as **Annexure N**.

The commissioning schedule of Lower Subansiri as indicated in various meeting/ letters is as follows-

- a) In meeting chaired by Additional Secretary (Power) on 25/02/2009.
 - NHPC confirmed that COS for the first unit of the project shall be January 2012 and the remaining units would be commissioned by December 2012.
- b) In meeting held on 25.06.2010 to review performance of NHPC for the quarter ending March 2010-
"CMD NHPC informed that 3 units are likely to be commissioned by March, 2012".
- c) Letter dated 25/02/2011 from NHPC to the Petitioner specifying the date of commission of Lower Subansiri Hydroelectric project as 1st unit Dec'13, balance by Aug'14.
- d) In CEA status of Hydro Electric projects dtd. 30.09.14, the scheduled of Lower Subansiri has been shown as 2016-18.
- e) In CEA status of Hydro Electric projects for 12th plan and beyond, the scheduled of Lower Subansiri has been shown as 2019-21 and of Kameng HEP as 2016-17

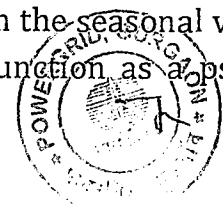
20. In 113th OCC of NER held on 12.07.2016, the commissioning scheduled of Kameng HEP has been informed as 1st two nos of unit by Mar'17.

Copies of all the relevant documents is attached hereto and marked as **Annexure O**.

21. In addition, 24 Generators having installed capacity of 14750MW were in pipeline in the different river basins of Arunachal Pradesh.

22. That with the NER -NR/WR Interconnector -I, shall provide the following benefits -

- The link provides flexibility of power transfer in the seasonal varied hydro power generation of NER and would function as a pseudo phase-shifter.



- Surplus power to the extent of 1500 MW can be exported/imported between NER and other region.
- Power to be imported by NER during low hydro season.
- The link would enhance the power transfer capacity between ER & NR. With the commissioning of many generation projects coming up in NER, Bhutan & Sikkim in next 2-3 years, power flow over this link shall increase.
- This link would provide stability to interconnection of NER with National Grid.
- This shall reduce maximum angle spread across the NER –NR grid by 35-40 degree.

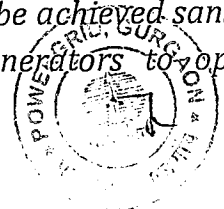
23. It is also place on record the Report of Sub-Committee of CAC on Congestion chaired by Sh. R V Shahi and including Members from CEA, CERC, GRIDCO, APTRANSCO, POSOCO, IIT, MERC, APP) dated June' 2015 wherein the following has been recorded –

“(xix) NER States have huge Hydro potential. It would be wrong to assume that all projects will be developed in the same time frame. It would be also be a wrong strategy to develop transmission systems adequate enough only for the projects already under implementation. Long term planning would require development of transmission systems in a manner that they are normally underutilized in the initial years but later utilized well.”

Copy of the Report is attached hereto and marked as **Annexure P**.

24. It is also place on record the policy framework for transmission development-

- **As per tariff Policy:** *The transmission capacity would be planned and built to cater to both the redundancy levels and margins keeping in view international standards and practices.*
- **Suggestion by the sub group on power transmission constituted by MoP (2013):** *Planning, funding and implementation of the National grid to ensure that transmission is ahead of generation & load growth.*
- **As per CERC Staff Paper on Tr. Planning, LTA/MTOA and related Issues (Sep 2014):**
 - a) The cost of transmission system being significantly less than that of cost of generation....ideally it must be ahead of generation both in time and capacity to avoid congestion or bottling up of power.*
 - b) Transmission, planning needs to be taken as integrated resource planning.....development of electricity industry cannot be achieved sans a robust transmission network linking de-licensed generators to open access customers in any part of the country.*



- c) *GNA-requires establishment of high capacity transmission corridors all over the country, ahead of generation.*

The Extract of SCMs, RPC, QPR and relevant documents are enclosed as **Encl:1**

6.0 Approval of the Scheme

The investment approval for implementation of **NORTH EAST – NORTHERN / WESTERN INTERCONNECTOR – I PROJECT** was accorded by Board of Directors of the petitioner vide the Memorandum No. C/CP/NER-NR.WR Intr-I/97 dated **27th February, 2009** with an estimated cost of **Rs. 11130.19 Crore including Interest during Construction (IDC) of Rs 1066.05 Crore.** Further, Revised Cost Estimate (RCE) of the project was approved by Board of Directors of the petitioner vide the Memorandum No. C/CP/RCE:NE-NR/WR Interconnector-I dated **09th December'2015** with an estimated cost of **Rs. 13762.71 Crore** including IDC of **Rs. 1747.32 Crore** based on April, 2015 price level; a copy whereof is enclosed herewith as **Encl.-2**

- 6.1 The scope of work covered under **NORTH EAST – NORTHERN / WESTERN INTERCONNECTOR – I PROJECT** are as follows:

TRANSMISSION LINES

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

- (i) Biswanath Chariali – Agra ± 800 kV, 6000MW HVDC Bipole line

As per Investment approval: *(This includes 22 km of four (4) nos. of corridors with 800 kV HVDC towers in the chicken neck area. Two of the corridors would be utilized by stringing of the Biswanath Chariyali – Agra HVDC bipole line (one pole in each corridor) while the other two corridors would be strung with single panther conductor per corridor charged at 132kV. Further, this would include Earth Electrode line of 50 Km length at Biswanath Chariyali end and of 40 Km length at Agra end.)*

Scope Change As per RCE: *(This includes four (4) nos. of corridors with 800 kV HVDC towers in the chicken neck area. One corridor has been utilized by stringing of the Biswanath Chariyali – Agra HVDC bipole line while the other three corridors are proposed to be charged at 400kV. Further, this would include Earth Electrode line at Biswanath Chariyali end and at Agra end.)*

- (ii) Balipara – Biswanath Chariali 400kV D/C line
(iii) LILO of Ranganadi – Balipara 400kV line D/C at Biswanath Chariali
(iv) Biswanath Chariali – Biswanath Chariali (AEGCL) 132kV D/C line

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

- (i) Kameng – Balipara 400kV D/C line
(ii) Balipara – Bongaigaon 400kV 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) –400kV 2 nos x D/C lines with twin Lapwing conductor

SUBSTATIONS

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

- (i) Establishment of 400/132kV Pooling Station at Biswanath Chariali with 2x200MVA, 400/132/33kV Transformers along with associated line bays
(ii) HVDC rectifier module of 3000MW at Biswanath Chariali and inverter module of 3000MW capacity at Agra
(iii) Augmentation of 400kV Agra substations by 4x105MVA, 400/220/33kV transformer along with associated bays
(iv) Extension of 400kV line bays at Balipara substation
(v) Extension of 132kV line bays at Biswanath Chariali (AEGCL)

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

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

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

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

Reactive Compensation

Substation	Bus Reactor
1. Biswanath Chariali	2x80 MVAR
2. Bongaigaon	1x80 MVAR
3. Balipara	1x80 MVAR
4. Lower Subansiri	1x80 MVAR*
5. Kameng	1x80 MVAR*

* These reactors would be a part of generation switchyard

Transmission Lines	Line Reactor
1. L.Subansiri-Biswanath Chariali 400kV D/C Line	:4x63 MVAR
2. Balipara-Bongaigaon 400kV D/C (Quad) Line	:4x63 MVAR
3. Balipara-Biswanath Chariali 400kV D/C line resulting from LILO of Ranganadi-Balipara 400kV D/C line at Biswanath Chariali : Existing 1x50 MVAR Fixed line reactor in each circuit at Balipara end to be made switchable at the present location itself.	

Relevant pages of DPR for Reactive Compensation is enclosed as **Encl-3**

The Schematic diagram of the transmission system associated with "NORTH EAST - NORTHERN/WESTERN INTERCONNECTOR-I PROJECT" is enclosed herewith as Encl. - 3

6.2 Implementation Schedule

As per the investment approval, the schedule completion is within 54 months for assets under Part – A and 48 months for Part – B & C from the date of approval of Board of Directors. The assets covered under the instant petition pertains to Part – A of the transmission scheme and hence, the commissioning schedule is Aug 2013. The subject assets under this petition are anticipated to be put under commercial operation w.e.f. 01.09.2016. Thus, there is time overrun of 37 months in all the assets under instant petition from the schedule date of commissioning. The CEA certificate under Regulation 43 (Measures relating to Safety and Electric Supply) Regulation-2010 for HVDC Pole-II and Earth Electrode is enclosed as Encl: 3

6.3 STATUS OF TRANSMISSION PROJECT :

6.3.1 Major portion of the project have been implemented and the status of tariff petition for the assets under NORTH EAST - NORTHERN/WESTERN INTERCONNECTOR-I PROJECT

S No	Name of Asset	Schedule Commissioning as per IA	Anticipated /Actual DOCO	Covered in Petition No.
Under the scope of Part – A				
1	± 800 kV HVDC Biswanath Chariali – Agra Pole-1 (1500 MW HVDC Terminals at Biswanath Chariali and Agra each along with the ± 800 kV Hexa Lapwing Transmission Line) (Asset-I)	Aug' 2013 (54 months from the date of I.A.)	01.11.2015 (Actual)	67/TT/2015
2	Loop In and Loop Out (LILO) of 400kV Ranganadi-Balipara-I T/L at Biswanath chariali PS alongwith associated bays at Biswanath chariali PS (Asset-II (1.a))		28.10.2015 (Actual)	
3	Loop In and Loop Out (LILO) of 400kV Ranganadi-Balipara-II T/L at Biswanath chariali PS alongwith associated bays at Biswanath chariali PS (Asset-II (1.b))		27.10.2015 (Actual)	
4	132kV D/C BNC (PG) - BNC (AEGCL) T/L alongwith associated bays at BNC (AEGCL) and BNC Pooling Station (PGCIL) (Asset-II (2))		01.10.2015 (Actual)	
5	200MVA, 400/132/33kV ICT - I at Biswanath Chariali PS (Asset-II (3))		19.12.2015 (Actual)	

6	200MVA, 400/132/33kV ICT - 2 along with associated bays at BNC	Aug' 2013 (54 months from the date of I.A.)	01.10.2015 (Actual)	259/TT/2015
7	80MVAR Bus Reactor - 1 along with associated Bays at Biswanath Chariali		03.10.2015 (Actual)	
8	80MVAR Bus Reactor - 2 along with associated Bays at Biswanath Chariali		26.02.2016 (Actual)	
9	Augmentation of 400kV Agra Sub-Station by 1X315 MVA, 400/220/33kV ICT along with associated Bays		10.12.2015 (Actual)	
10	400kV D/C Balipara-Biswanath Chariali # 3 Transmission Line along with associated bays at Balipara and Biswanath Chariali PS		12.10.2015 (Actual)	
11	400kV D/C Balipara-Biswanath Chariali # 4 Transmission Line along with associated bays at Balipara and Biswanath Chariali PS	01.10.2015 (Actual)		
12	±800kV Biswanath Chariali-Agra HVDC POLE-II (1500MW HVDC Terminal at Biswanath Chariali and Agra) along with Earth Electrode line and Earth Electrode Station for both BNC and Agra : ASSET-I	Aug' 2013 (54 months from the date of I.A.)	01.09.2016 (Anticipated)	Covered in instant petition
Under the scope of Part - B				
1	2 nd 315 MVA,400/220kV ICT at Misa	Mar 2013 (48 months from the date of I.A.)	01.7.2012 (Actual)	391/TT/2014
2	80 MVAR Bus Reactor at Balipara		1.10.2012 (Actual)	131/TT/2015
3	80 MVAR Bus Reactor at Bongaigaon		1.3.2013 (Actual)	217/TT/2015
4	400kV, D/C (Quad) Balipara - Bongaigaon T/L along with associated bays at Bongaigaon S/s and Balipara S/s including 30% FSC at Balipara and 4 X 63 MVAR, 420kV Line Reactors		07.11.2014 (Actual)	65/TT/2015

Balance Assets under project to be Commissioned

S No	Asset Name	Remarks
PART - B PROJECTS		
1	Kameng - Balipara 400kV D/C line alongwith associated bays and 1x80MVAR Bus reactor	Anticipated by Mar 2017 (Matching with generation)
PART - C PROJECTS		
1	Lower Subansiri - Biswanath Chariali (Pooling Point) - 2 nos. 400kV D/C lines with twin Lapwing conductor alongwith associated bays and 1x80MVAR Bus reactor and 4x63MVAR Line Reactor	Anticipated by 2019-2020 (Matching with Generation)



6.3.2 As detailed above, the subject transmission system was conceived after lot of deliberation at different forums including at the highest level of MoP in view of the requirement of high capacity transmission highway to harness huge hydro potential in NER and transferring power to deficit region through the limited availability of corridor in the chicken neck area.

Keeping in view the same, the Hon'ble Commission has also expressed in its order dated 08.01.2016 in petition no 67/TT/2015, the following benefits of this system as under:

- *This transmission system is of strategic and national importance and is in the long term interest of the economy and consumers of the country.*
- *This link is a vital connection for harnessing the present and anticipated exploitation and optimal utilization of hydro, thermal and renewable energy resources in the country.*
- *It infuses a high degree of confidence, certainty and assurance for development of hydro power potential in North-East Region of the country.*
- *This high capacity interconnection would go a long way for integration of large renewable energy resources being developed in different parts of the country.*
- *It plays an important role in strengthening the National Grid since it provides stability to the Grid and allows for grid security and reliability through its inherent flexibility.*

It facilitates bi-directional controlled flow of power. This bi-directional HVDC technology shall enable optimal hydro-thermal mix of all the regional grids due to its connectivity with the hydro surplus North Eastern Region on one.

The Hon'ble Commission while noting 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, has passed an interim order in the matter 67/TT/2015 on 08/01/2016, inter-alia holding as under –

"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.

.....

Abiding by the decision of the Hon'ble Commission vide its aforesaid order, the Petitioner has taken up the matter with MoP vide letters dated 12th February'2016 for granting assistance from PSDF as well as Government grant under Clean Energy Fund. Further, the Petitioner has also applied to POSOCO for the PSDF fund vide its application dated 21st June'2016.

7.0 Reasons for Time Overrun

As detailed at para 6.3 above, the Part A of the project comprising of the instant assets covered under the subject petition was scheduled to be completed by August 2013 i.e., within 54 months from the date Investment Approval. The Pole-2 (i.e., complete Bipole#1) is expected to be commissioned by 01.09.2016 and covered in this petition are under the scope of North East-Northern/Western Interconnector-I. Presently the project is in advance stage of execution and Pole-1 along with AC bays at Agra and Biswanath Chariali is commissioned on 01.11.2015.

The delay in execution is mainly because of various factors viz. delay in land acquisition at BNC, RoW vis-à-vis law and order problem at sites, litigations, forest clearance, Heavy Monsoon and Flash Flood, strikes, bandhs, as elaborated below;

The delay in execution of Pole – II i.e., the instant assets can be bifurcated into two parts.

Part – A : Delay upto 01st November 2015 i.e, delay in execution of Pole – I which have been enumerated in detail in Petition No. 67/TT/2015 as brought out hereunder:

A. ±800 kV HVDC Terminals

7.1 Opposition to Initial Project activity

- The Biswanath Chariali HVDC station is located at Baghmari in Biswanath Subdivision of Sonitpur district in Assam. This is a disturbed area infested by banned extremist organizations.
- Since the beginning of construction activities, there was persistent opposition by Villagers. The problem slowly turned acute and POWERGRID officials were



manhandled by miscreants at site on 24-09-2012 causing serious law & order situation.

- There were instances of kidnapping, ransom demand, killings and clashes with extremist organizations apart from frequent bands, strikes, picketing etc. Insurgent activities occur still now.
- On 26-01-12, villagers / miscreants ransacked /POWERGRID's site office with ulterior motive to jeopardize the Project activity. On 24-09-12 villagers manhandled POWERGRID officials at site creating huge setback to the morale of POWERGRID, ABB AB and other working agencies.
- Due to serious problems at site, 1 (one) platoon of CRPF personnel was deployed at $\pm 800\text{kV}$ Biswanath Chariali station site, Baghmari w.e.f. 20.11.2012.

7.2 Delay in land acquisition at Biswanath Chariali HVDC Terminal Station & Commencement of Construction activity due to RoW problems / closing of boundary wall

In spite of the formal land allocation, full / complete physical possession of the land was not available with POWERGRID. Land was acquired progressively from 29.07.2010 to 24.03.2011.

Though the boundary wall construction work was awarded by the petitioner in 2008 based on the District Administrator notification, wall construction could not be completed because of delay in land handing over and oppositions by villagers of surrounding villages and the encroachers of the allotted / acquired land. The local protesters had impetus / motivation from the stalemate of nearby directly connected Lower Subansiri Hydro Electric Project which still remains stalled.

Efforts were made to complete the wall construction by constant persuasion with the protesters and district administration. In spite of putting all possible efforts and resources including police protection wall could not be completed.

There were four openings to the boundary wall making two complete thoroughfares. Villagers kept using the thoroughfares willfully abandoning the surrounding permanent roads to demonstrate their opposition to the construction of the project. Miscreants also took advantage of the situation and created regular disturbances amidst the extremely poor law and order situation in the area. The Petitioner was pursuing the aforesaid matter with the local administration, the correspondences of which are collectively attached at Encl-4



To win over the villagers and as guided by the district administration, the petitioner constructed a complete peripheral metal road of about 4 km. including 2 (two) bridges surrounding the HVDC station in Jan'13 at a cost of Rs.1.6 cr. and appealed to the villagers to vacate the HVDC station land to facilitate closing of boundary wall and start construction activity. However the villagers did not relent and regularly intimidated Petitioner's officials.

A concerted effort was made on 30-04-13 by the Petitioner, State Police, District administration and CRPF to close the two thorough fares but huge law and order situation occurred at site. In the melee of the protest, miscreants burnt down a hired jeep of Petitioner and damaged several others of Police officials. 18 police personnel were also injured in the clashes. In retaliation, police had to resort firing to control the mob wherein one protester was killed. On advice of State Administration, ABB AB suspended all Construction activities w.e.f 30-04-13. It took several months to remobilise the site and skeletal works started from June'13 with Police protection amidst the open Boundary walls.

The issue of closures of Boundary walls / thoroughfares was taken up by the Petitioner with the Govt. of Assam and a final effort was made in association with district and police administration on 05-09-13 and finally the walls were closed with great difficulty. A detailed chronology of events is reproduced below for perusal.

7.3 Delay due to stoppage of work on account of firing at Biswanath Charili HVDC Substation:

There was intense local agitation against construction of boundary wall of HVDC station. The situation got worse on 30.04.2013 when one local farmer got killed in police firing. This resulted in worsening of law and order situation in the area. All the construction activities were paralyzed till 30.06.2013 till the situation normalized. This led to a loss of 61 working days

Total delay attributable to aforesaid reasons is 94 months i.e., from November 2005 to September 2013. The chronologies of events are enumerated below:

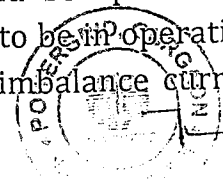
Date	Description of event (Leading to delay in s/s works at Biswanath Chariyali)
16.11.05 & 15.09.06	Indent for land was submitted by POWERGRID to State Government Authorities
04.12.2006	Local Government Authorities forwarded the proposal for allotment of Govt land to District Authorities.
20-06-2008	Government Authorities accorded permission to start preliminary works at the Substation site. Thereafter, POWERGRID awarded boundary wall construction works anticipating early handing over of land for BNC S/S.

29.07.10 & 24.03.11	About 150 Acre of Land handed over to POWERGRID for Biswanath Chariyali substation.
26.01.2012	Villagers / miscreants ransacked / POWERGRID's site office with ulterior motive to jeopardize the Project activity.
24.09.2012	Villagers manhandled POWERGRID officials at site creating huge setback to the morale of POWERGRID, ABB AB and other working agencies.
20.11.2012	Due to serious problems at site, one platoon of CRPF personnel was deployed at ±800kV Biswanath Chariyali station site, Baghmari initially for 3 months for ensuring physical security at site and to assist in closing the boundary walls. Since the situation continued to remain serious, deployment of CRPF has since been extended on 4 different occasions from time to time as warranted.
30.04.2013	Finally a concerted effort was made by POWERGRID, State Police, District administration and CRPF to close the two thorough fares but huge law and order situation occurred at site. In the melee of the protest, miscreants burnt down a hired jeep of POWERGRID and damaged several others of Police officials. 18 police personnel were also injured in the clashes. In retaliation, police had to resort firing to control the mob wherein 1 protester was killed. ABB AB immediately suspended all Construction activities and left the site. However POWERGRID continued their site office and other activities with CRPF and AISF personnel deployment at site.
30.04.2013	ABB AB suspended all Construction activities after incidence of killing of one protester in police firing during efforts to close the B'wall opening.
13.06.2013	Due to persistent tension and threat from miscreants, ABB AB completely closed their site office and abandoned the site
28.06.2013	The site remained completely shut thereafter. It took several months to remobilise the site and skeletal works started from June'13 with Police protection amidst the open B'walls. M/s ABB AB partially restarted their construction activities at BNC site including stone piling w.e.f 28-06-13.
05.09.2013	The issue of closures of B'walls / thoroughfares was taken up by highest level of POWERGRID with the Govt. of Assam and a final effort was made in association with district and police administration on 05-09-13 and finally the walls were closed with great difficulty.

The detailed chronology for land acquisition at Biswanath Chariyali along with supporting documents is enclosed as **Encl: 4**.

Part - B : delay attributable to execution of Pole - II :

The delay in execution of Pole - II is mainly due to non-readiness of the 110/132kV 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 substation were not ready, Pole - I including the HVDC Line were commissioned in November 2015 as system could be operated in monopolar 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 forced to delay the commissioning of Pole – II matching with completion of Earth Electrode line and Substation.

B. Earth Electrode Transmission Line

7.4 Delay in handing over of Land for Earth Electrode station at Agra

The Proposal for land for Earth Electrode Station at Agra was submitted to revenue department on 04.06.2010. Based on the request of Revenue department official, detailed proposal along with the land use pattern was submitted on 14.12.2011. Section – IV and Section VI Notification for the same were issued on 25.09.2012 and 03.05.13 respectively. With completion of Section-9(17) on 15.07.13, notice for payment of 80% amount was issued on 27.11.2013. In the meanwhile, new acquisition bill was issued by GoI based on which farmers demanded revised rates as per the new act. The cost of the land as demanded by district administration was deposited by the Petitioner and subsequently, ADM (LA), Agra issued Interim Award & possession letter to POWERGRID vide letter dated 07.12.13. Though the compensation as per the new act were paid by the Petitioner to the Revenue Authorities, it 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 lead to severe RoW issues as farmers did not allow the Petitioner/its Contractor to start the work. The Petitioner followed up with the District Administration on regular basis. However, only pursuant to issuance of the procedure and the guidelines for disbursement of land compensation to the affected land owners in Oct'14 and release of compensation to the farmers, Possession of land was granted to the Petitioner on 25.04.2015.

Details of event in chronological order in respect of acquisition of land for earth Electrode Substation at Agra:

Sl. No	Date	Description
1	28.02.2008	Earth electrode site finalized
2	24.02.2010	ग्राम शेरब की तरमीन के संबंध में
3	04.06.2010	पत्र अपर जिलाधिकारी के लिए 31.3302 है भूमि अर्जन के संबंध में
4	13.08.2010	पत्र जिला सांख्यिकी अधिकारी के लिए 31.3302 है. भूमि अर्जन के संबंध में
5	07.12.2010	कार्यालय अर्थ एवं संख्याधिकारी आगरा के द्वारा बैठक का एजेंडा
6	21.03.2011	कार्यालय जापन आयुक्त
7	14.10.2011	प्रपत्र संख्या - 8
8	23.06.2012	धारा-4(1/17),की अधिसूचना जारी कराये जाने के संबंध

9	31.10.2012	स्थानीय समाचार पत्रों में धारा-4(1/17) की अधिसूचना प्रकाशित कराने के संबंध में पत्र
10	02.04.2013	धारा- 6(1)/17), भूमि अर्जन अधिनियम, 1984 की अधिसूचना निर्गत किये जाने के संबंध में
11	12.03.2013	जिलाधिकारी आगरा का पत्र धारा - 6(1)/17), भूमि अर्जन अधिनियम,1984 की अधिसूचना जारी कराये जाने के संबंध में
12	09.07.2013	कास्तकारों से वार्ता कर दर निर्धारित कर करार निष्पादित कराये जाने के संबंध में
13	24.08.2013	कास्तकारों से वार्ता कर दर निर्धारित कर करार निष्पादित कराये जाने के संबंध में
14	07.12.2013	कब्जा हस्तांतरण/ अधिकार पत्र
15	24.07.2014	Regarding acquisition of land for construction of Earth Electrode station at Serab station
16	09.10.2014	अपर जिलाधिकारी को पत्र ग्राम शेरब में अर्जित होने वाली 31.3302 है. भूमि के संबंध में
17	25.04.2015	भूमि का वास्तविक कब्जा

The Petitioner had initially planned for completion of Electrode Station within 20 months from the date of possession. Since the actual handing over the land was considerably delayed, the Petitioner expedited the implementation of work with prudent and advance planning so as to achieve the same with 16 months and is expected to be commissioned by September'2016. Documentary evidence enclosed as Encl: 5

7.5 Delay in handing over of deforested forest Land for Earth Electrode station at Thogiabari

A deserted and deforested forest land was identified for Earth Electrode Station at Thogiabari, Biswanath Chariali for which 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 03/05/2010, 24/08/2011 and 03/08/2012, the 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 have 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 at the highest priority for the Petitioner as well as for the District Administration.

Subsequent to resolution of local agitation at Biswanath Chariali Site in September 2013, the Petitioner followed up with the District Administration and the forest officials for handing over of the said land. The land was finally be handed over to the Petitioner on 24.04.2014.

Details of event in chronological order in respect of Forest Clearance for earth Electrode Substation at Biswanath Chariali

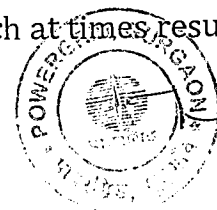
Sl. No	Date	Description
1	07.05.2007	Submitted proposal for diversion of 73.275 HA of Forest land
2	22.06.2011	Letter to Deputy Commissioner for providing certificate with regards to non-existence of ST and forest dwellers
3	26.10.2012	Letter from MoEF to Govt. of Assam
4	14.05.2013	Letter from Govt of Assam to Upper Assam Zone
5	24.04.2014	Letter from DFO regarding approval of Forest Land

From the above, it may be seen that the, forest clearance of the land was accorded only on 24.04.2014 i.e. after 83 months of submission of proposal against a nominal period of 10-14 months.

For completing the earth electrode station within commissioning scheduled as per Investment approval i.e. 01.08.2013, the forest clearance for land was to be received before December'2011. But, the last Forest clearance for land was received in the month of April'2014, with a delay of around 27 months. Documentary evidence enclosed as **Encl-6**.

7.6 Right of Way issues in construction of Earth Electrode Line:

The construction of Earth Electrode line at Biswanath Chariali started as early after receipt of 1st stage forest clearance of substation land. RoW Problem persisted mainly in Assam portion almost since beginning wherein landowners have come forward in organized manner physically stopping works of the line in numerous occasions and demanding exorbitantly high compensation. The Petitioner approached the District Administration on several occasion for early resolution of the issues. As already brought – out above, during the period April 2012 – September 2013, the problem at Biswanath Chariali had turned severe due to regular protest by miscreants, physical violence towards the personnel of the Petitioner/its Contractor deputed for the line work which at times resulted in firing by police in retaliation to control the mob.



7.7 Violence/riot in Assam / BTAD (Bodo-land Territorial Autonomous District) & other areas:

Ethnic riot/violence erupted frequently / many times in BTAD area during the period from 21.07.2012 to 12.09.2014 severely affecting the works. Working gangs left site and material transportation was also affected adversely. Frequent communal Clash followed by Promulgation of section 144 (Cr.PC) in several District of Assam affected progress.

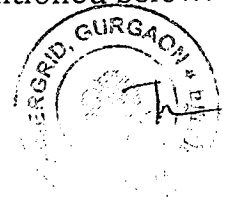
Constant threats from various underground organizations to the working gangs, contractors' engineers and Petitioner's officials created immense difficulties in carrying out the works. Rampant extortion bids and warnings not to carry out works without fulfillment of these bids, resulted in loss of valuable working time till negotiations were arrived upon. These incidents could not be mitigated despite all possible support & assistance from district authorities & local administration.

In 2013, a renowned tea planter and businessman from Guwahati were killed by militants at Sotea under Sonitpur district (about 20 - 25 km. from site). Again in Jan'14, an Addl. Superintended of Police was also killed under Dhekiajuli PS in Sonitpur district.

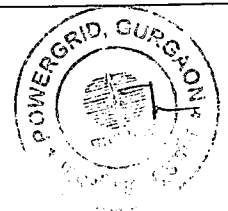
Even though security was provided by the District Administration, the Petitioner/its Contractor were unable to proceed ahead with the work. Subsequent to closure of the boundary wall with the help of CRPF and District Administration, the RoW problems in the line section got escalated with and at times remained standstill/idle due ethnic riot/violence and life threats to the gang members deployed by the Contractor. The Petitioner has to face severe contractual issues due to frequent mobilization/demobilization of labour.

The Petitioner could only resume the construction work in September 2014 after the violence/ riots got subdued. The pace of work was slow due to RoW issues at several locations which was resolved with the help of District Administration during 2015 - 2016. The RoW issues for the some of the locations were resolved as late as July 2016. With resolution of RoW issues, the work is expected to be completed by September 2016.

Further, it is pertinent to mention here that construction work held up in following locations because of major ROW problems as mentioned below:



Sl. No	Date	Correspondence to	Description
1	09.07.2011	Circle Officer, Naduar Revenue Circle,	Obstruction in Construction work at Loc. No:9/0
2	28.07.2011	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	07.11.2011	Circle Officer, Naduar Revenue Circle,	Obstruction in Construction work at Loc. No:11/1
5	22.11.2011	Circle Officer, Naduar Revenue Circle,	Obstruction in Construction work at Loc. No:6/0
6	02.03.2015	Circle Officer, Chariduar revenue circle	Obstruction in Construction work at Loc. No:44/0
7	16.03.2015	Officer Incharge, Chariduar Police Station	Obstruction in Construction work at Loc. No:44/0
8	18.04.2016	Deputy Commissioner, Sonitpur	ROW Issue in 1.492km stretch
9	05.05.2016	Minutes of meeting	With Addl chief Secretary
10	12.05.2016	Addl chief Secretary, Power and Soil Conservation	ROW Issues
11	13.05.2016	Circle Officer, Chariduar revenue circle	ROW Issues 28A-29/0
12	22.05.2015	Officer in charge, Chariduar Police Out Post	ROW Issues
13	31.05.2016	Deputy Commissioner, Sonitpur	Obstruction by landowners
14	10.06.2016	Hon'ble Minister of Labour, Revenue & Power	Severe ROW problem by land Owners (5.31km)
15	14.06.2016	SP, Sonitpur	Regarding theft of line conductor
16	15.06.2016	SP, Sonitpur	Regarding theft of line conductor
17	16.06.2016	Deputy Commissioner, Sonitpur	Obstruction of Land Owners around 600 mtrs
18	30.06.2016	Hon'ble Minister of Labour, Employment & Power	Obstruction in the clearance of infringements along the corridor.
19	20.07.2016	Officer In charge, Chariduar PS	FIR for obstruction in executing 0.357km



7.8 Threats from outfit organization/deteriorated law and order situation:

Constant threats from various underground organizations to the working gangs, contractors' engineers and Petitioner's officials created immense difficulties in carrying out the works. Rampant extortion bids and warnings about not to carry out works without fulfillment of these bids resulted loss of valuable working time. These incidents could not be mitigated despite all possible support & assistance from district authorities & local administration.

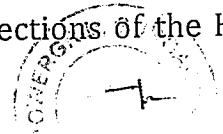
- Abduction of working personnel from 400 kV D/C (Quad) Balipara-Bongaigaon running parallel to the HVDC and Earth Electrode line portion affected the works in several occasions.
- One stringing gang leader was abducted by militant groups on 25th March 2011 from loc. # 63/1 of Balipara – Dolgaon section of the line.
- In two separate incidents one engineer of the pile contractor was abducted on 15th Feb 2013 from Tamulpur, BTAD, Assam and another Engineer was abducted on 22nd Dec 2013 from Chirang district, Assam by militant groups. Due to these incidents normal workings hampered in adjacent locations and due to prevalent fear-psychosis gang outputs reduced considerably.
- There was complete stoppage of work for one month (Feb'12) at Mangaldoi Section affecting nearly 50 kms stretch due to threat from NDFB militant groups.

7.9 Extended monsoon and HFL:

In 2011 and 2012 the flood levels in lower Assam were very high. Due to which works at many locations were disrupted for months together and material transportation was also suffered.

It may be seen from the preceding paras that various reasons, mainly late receipt of land at Biswanath Chariali, Earth Electrode station land at Agra, forest clearance for land at Biswanath Chariali for earth electrode Station, severe RoW problems in construction of Earth electrode line, Violence and riots in Assam, law & order problems have hampered the progress of work badly, leading to the delay in completion of Earth electrode transmission line. It is also to be appreciated that the different types of problems were encountered by the Petitioner simultaneously, bringing the work to a complete halt on many occasions.

However, concerted efforts by the Petitioner kept the project alive. Despite all out efforts by the petitioner, physical progress in some of the sections of the HVDC



station and Earth electrode transmission line was severely affected for a period ranging from 6 to 37 months. Documentary evidence enclosed as Encl:7.

Though the various problems occurring concurrently could have delayed the project enormously, but the experience & expertise of the petitioner in project planning & execution curtailed the delay. RoW in Chariduar section could be made available as late as July/August, 2016. Thereafter, petitioner immediately completed the work on war footing and anticipated to be commissioned the HVDC Pole-II alongwith the Earth Electrode line in September'16.

As is evident from above that the delay was beyond the control of POWERGRID. Based on the above unforeseen delay reasons it is prayed to the Hon'ble Commission to condone the delay in completion of subject assets on merit of the same being out of the control of Petitioner in line with CERC Regulations'2014 12(2)(i) "uncontrollable factors". Relevant documents of time overrun are enclosed as Encl - 4 to 7

8.0 Completion Cost

8.1 That the application for determination of tariff is filed in line with provision 7 (2) of tariff Regulation 2014 applicable for 2014-19 period. Further, that the present petition covers approval of tariff based on estimated expenditure incurred up to anticipated DOCO and additional capitalization projected to be incurred from DOCO to 31.03.2019 in respect of the subject asset as per detail given below; copy of management certificate in respect of the assets covered in this petition is enclosed herewith as Encl - 8

(₹ in Lakhs)

Name of the element	Apportioned Approved Cost (As per FR)	Apportioned Approved Cost (As per RCE)	Expenditure Up to DOCO	Proposed Expenditure		Estimated completion Cost
				2016-17	2017-18	
Asset-I	194699.17	254374.87	228319.15	9455.06	8256.63	246030.84

Initial Spares:

	Plant & Machinery Cost (Excluding IDC/IEDC, Land cost & Cost of Civil Works) for the purpose of Initial Spares	Initial Spares	% of Initial Spare
HVDC Station (Pole-II)	175639.20	6999.95	4.151
Transmission Line (Earth Electrode)	23035.65	431.67	1.910

Initial Spares claimed against HVDC Station is marginal high w.r.t the ceiling limit of 4% and in case of Transmission Line is 0.91% higher than ceiling limit of 1%. The overall initial spares for the project is well within the ceiling limit as per Regulation' 2014.

Hon'ble Commission is prayed to allow the same for the purpose of determination of tariffs, as number of elements of the projects are yet to be commissioned and tariff order for the same are yet to be issued by the Hon'ble Commission. After completion of the whole project the Commission may take a view towards the cost of the spares to be allowed as per the ceiling of Regulations.

Reason for Cost Overrun with respect to FR:

The total apportioned approved cost (as per FR) of the \pm 800kV Biswanath Chariali-Agra HVDC POLE-II (1500MW HVDC Terminal at Biswanath Chariali and Agra) along with Earth Electrode line and Earth Electrode Station for both Biswanath Chariali and Agra was ₹ 1946.99 Crore including IEDC & IDC as per 4th quarter 2008 price level. It is submitted that the Revised Cost Estimate (RCE) for the project was approved by Board of Directors of Petitioner on dated 9th December'2015. The apportioned cost as per RCE is Rs. 2543.75 Crore including IEDC & IDC (Refer Form 5B).

Against the same, the estimated completion cost of the Asset based on the Management certificate works out to ₹ 2460.31 Crore including IEDC & IDC. Therefore, there is No Cost Overrun as per RCE. However, there is cost overrun of about ₹ 513.32 Crore as per approved apportioned cost (FR). The reasons for item wise cost variation between approved costs (FR), approved cost (RCE) and anticipated cost as on DOCO are explained in detail in Form-5 and are summarized hereunder:

Biswanath – Agra \pm 800kV, 6000 MW HVDC Bipole Line is a unique and first of its kind of project in the country. Being a Govt. enterprise, the Petitioner has the obligation for indigenous development of manufacturer as well as to adhere to Govt. of India guidelines in vogue. 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 estimate. The FR cost estimate is broad indicative cost

worked out generally on the basis of average unit rates of recently awarded contracts/general practice. It is submitted that 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.

- a) Cost variation of Rs. 221.43 Cr from FR (4th Quarter, 2008) and supply period (Dec 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.

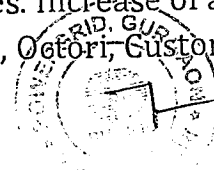
Here it is submitted that the aforesaid price variation can be bifurcated into two parts i.e., one from FR to Award of various Contract and other from Contract to final execution.

Regarding price variation from FR to award (March 2009 to December 2011), it is submitted that 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.

- b) The increase of about ₹ 69.99 Crore on account of Mandatory spares procured for HVDC equipment from apportioned FR cost.
- c) The cost of Land & site preparation (Survey & soil investigation and infrastructure) also increase by ₹ 32.93 Crore from apportioned FR cost, the actual land cost is as per the assessment made by concerned Govt. officials/ revenue authority of states.
- d) Increase in Earth Electrode transmission line length from estimated 90 kms (as per FR)(Agra end-40kms & Biswanath chariali end-50kms) to 111.60 kms (as per actual), increases the cost by about ₹ 34.44 Crore. 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.

- e) 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 Crore mainly on accounts of actual Taxes & duties, Octroi, Custom duty, excise duty etc paid.



- f) The cost of about ₹ 67.95 crore 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 & huts encountered in line corridor by concerned Govt. officials of Assam/ district revenue authorities /forest department, quantity & value of which are much greater than the notional estimate.

Tariff for the project has been claimed on the Capital Cost as on anticipated DOCO along with projected expenditure up to 31.03.2019. Hence, it is humbly prayed that Tariff may be allowed on the completion cost ₹ 2460.31 Crore for the asset covered under instant Petition.

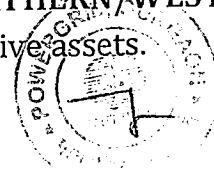
- 8.2 The details of underlying assumptions for additional capitalization for this asset is summarized below:

The admissibility of additional capital expenditure (Add. Cap.) incurred after DOCO is to be dealt in accordance with the provisions of Regulation 14, the extract of Regulation 14 of the regulations, 2014 is reproduced as under:

“Additional Capitalization”

- (1) *The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and upto the cut-off date may be admitted by the Commission, subject to prudence check:*
- (i) *Undischarged liabilities recognized 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 of law; 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.

- 8.3 The additional Capitalization incurred/projected to be incurred in the contextual asset is mainly on account of Balance/Retention Payments and hence the same may be allowed by Hon'ble Commission. The details of underlying reasons for additional capitalization for Asset ± 800kV Biswanath Chariali-Agra HVDC POLE-II (1500MW HVDC Terminal at Biswanath Chariali and Agra) along with Earth Electrode line and Earth Electrode Station for both Biswanath Chariali and Agra under NORTH EAST - NORTHERN/WESTERN INTERCONNECTOR-I PROJECT are given in form -7 of respective assets.



That the petition for determination of tariff is being filed in line with Regulation 7 under chapter 3 of tariff Regulation 2014 applicable for 2014-19 period.

9.0 TRANSMISSION TARIFF for 2014-19 BLOCK:

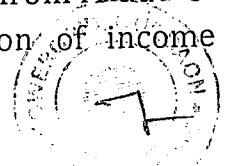
9.1 The tariff for block 2014-2019 has been worked out as per CERC (Terms and Conditions of Tariff) Regulations, 2014. In the present petition the transmission tariff has been calculated taking actual expenditure/estimated Expenditure upto anticipated DOCO and estimated expenditure from anticipated DOCO to 31.03.2019. Calculations for working out the tariff along with supporting documentation and interest rate proof are attached hereto as Encl - 9

9.2 The annual transmission tariff for the tariff period 2014-19 is summarized as below:

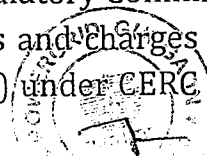
					₹ in lakhs
Name of the asset	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	0.00	0.00	16115.37	28572.70	28835.67

"While calculating Annual fixed charges, O&M rates as specified in the Tariff Regulation'2014 have been considered (i.e. Talcher-Kolar HVDC O&M rate for this HVDC & other O&M rates - line/sub-station as specified in regulation 2014). However, we are approaching the Hon'ble Commission through review petition for revision in the O&M rates for HVDC & line/ sub-station. Thus the Annual Fixed Cost is subject to the outcome of the said review petition."

10.3 That, it is submitted that the petitioner being 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 Hon'ble Commission as per illustration under regulation 25 (2) (i) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014. That as per clause 25 (3) of the above regulation, 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 tariff period 2014-15 to 2018-19 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. It is further 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 /adjustable during / after completion of income tax assessment of the financial year.



- 10.4 That as provided in clause 39 of the Tariff Regulations 2009 and clause 49 of the Tariff Regulations 2014, the deferred tax liability before 01.04.2009 shall be recovered from the beneficiaries or the long term customers /DICs as and when the same gets materialized.
- 10.5 Service tax on transmission has been put in the negative list w.e.f. 01.04.2012 and accordingly the Transmission Charges indicated at para 10.2 above, is exclusive of Service Tax and the same shall be borne and additionally paid by the respondent(s) to the petitioner and the same shall be charged, billed separately by the petitioner if at any time the transmission charges is withdrawn from the negative list. Further, any additional taxes are to be paid by the petitioner on account of demand from Govt / statutory authorities, the same may be allowed to be recovered from the beneficiaries.
- 10.6 In the tariff calculation for 2014-19 period Interest on Loan has been calculated on the basis of rate prevailing as on DOCO. The change in Interest rate due to floating rate of interest applicable, if any, for the project needs to be claimed / adjusted over the tariff block of 05 years directly from / with the beneficiaries.
- 10.7 The Govt. of India in the proposed GST which is likely to be introduced by Govt. of India, where the transmission charges are not exempted. Any tax payable by POWERGRID on account of implementation of GST May be reimbursed.
- 10.8 The transmission charges at para- 10.2 above is inclusive of O&M expenses for the project derived based on the norms for O&M expenditure for Transmission System as specified under regulation 29 (3) (a) of the tariff regulations for block 2014-19. It is the understanding of the petitioner that these norms for O&M expenditure been arrived by the Hon'ble Commission after 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. It is submitted that the wage revision of the employees of the petitioner company is due w.e.f. 1.1.2017 and actual impact of wage hike which will be effective from a future date has also not been factored in fixation of the normative O&M rates prescribed for the tariff block 2014-19. The scheme of wage revision applicable to CPSUs being binding on the petitioner, the petitioner reserves the right to approach the Hon'ble Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage, if any, during 2014-19.
- 10.9 The application filing fee, expenses incurred on publication of Notices in Newspapers and License fee may be allowed to be recovered separately from the respondents in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014. The fees and charges to be paid by the petitioner as ISTS licensee (deemed ISTS licensee) under CERC (Fees



10.10 The Transmission Charges and other related Charges indicated at para 10.2 above, is exclusive of incentive, late payment surcharge, FERV, any statutory taxes, levies, duties, cess, filing fees, license fee, RLDC fees and charges or any other kind of imposition (s) and/ or other surcharges etc. whatsoever imposed / charged by any Government (Central/State) and / or any other local bodies/authorities/regulatory authorities in relation to transmission of electricity, environmental protection, and/or in respect of any of its installation associated with the Transmission System and the same shall be borne and additionally paid by the respondent(s) to the petitioner and the same shall be charged, billed separately by the petitioner on the respondents.

11 Sharing of Transmission Charges

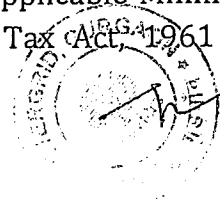
The Tariff for Transmission of Electricity (Annual Fixed Cost) as per para 10.2 of petition shall be shared as per Regulation-43 of CERC (Terms and Conditions of Tariff) Regulations, 2014. These charges shall be recovered on monthly basis and the billing collection and disbursement of Transmission Charges shall be governed by provision of CERC (sharing of interstate Transmission Charges and Losses) Regulations, 2010.

In the circumstances mentioned above it will be just and proper that the transmission tariff for the assets covered under this petition be allowed to be charged from the Respondents on the basis set out above. **The Petitioner submits that the Encl.-1 to Encl.-9 may please be treated as integral part of this petition.**

PRAYER

It is respectfully prayed that the Hon'ble Commission may be pleased to

- 1) Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition, as per Para - 10.2 above.
- 2) Transmission Tariff may be allowed on the estimated completion cost, since RCE for the project is approved.
- 3) Admit the capital cost as claimed in the Petition and approve the Additional Capitalization incurred / projected to be incurred.
- 4) 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.
- 5) 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



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.

- 6) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, and other expenditure (if any) in relation to the filing of petition.
- 7) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.
- 8) 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.
- 9) Allow the Petitioner to bill and recover Service tax on Transmission Charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list at any time in future. Further, any taxes and duties including cess etc. imposed by any statutory/Govt/municipal authorities shall be allowed to be recovered from the beneficiaries.
- 10) Allow the Petitioner if GST is imposed on transmission charges under the proposed GST the same may be allowed to be recovered from the beneficiaries.
- 11) Allow tariff up to 90% of the Annual Fixed Charges in accordance with clause 7 (i) of Regulation 7 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for purpose of inclusion in the PoC charges.
- 12) Allow the petitioner to bill Tariff from anticipated DOCO and also the petitioner may be allowed to submit revised Certificate and tariff Forms (as per the Relevant Regulation) based on actual DOCO.
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

GURGAON
DATED:06.09.2016

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