

**TT-Central Electricity Regulatory Commission
Engineering Division**

Technical validation

Docket No.: 292-TT-2013

Filing Date: 30.10.2013

Subject: Approval under regulation-86 of the CERC (Conduct of Business) Regulations' 1999 and CERC (Terms and Conditions of Tariff) Regulations' 2009 for determination of Transmission Tariff of 400/220 kV 125 MVAR Bus Reactor along with associated bays at Patna S/s under Transmission System for "Transfer of Power from Generation Projects in Sikkim to NR/WR Part-B" in Eastern Region for CERC tariff block 2009-14 period.

1. Scope of Work

Broad scope of works under the project is given below:

Transmission Line

- LILO of Teesta III-Kishanganj 400kV D/C line (quad) at Rangpo
- Rangpo-New Melli 220kV D/C line
- LILO of Gangtok-Rangit 132kV S/C line at Rangpo and termination of Gangtok-Rangpo/Chuzachen & Melli-Rangpo/Chuzachen 132kV line at Rangpo
- LILO of Teesta V-Silliguri 400kV D/C line at Rangpo
- Kishanganj-Patna 400kV D/C (quad) line.

Sub-Stations

- Establishment of 400/220/132kV Gas Insulated at Rangpo with 16X105 MVA, 400/220kV 1-Phse transformers and 3X100 MVA, 220/132kV 1-Phase transformers.
- Establishment of 220kV GIS switching station at New Melli
- Extension of bays at Kishanganj 400/220kV S/s
- Extension of bays at Patna 400/220kV S/s

2. Investment Approval:

The investment approval for "Transmission System for Transfer of Power from generation project in Sikkim to NR/WR-Part B" was accorded by the Board of Directors of POWERGRID on **17.03.2011** for Rs. 1585.12 Cr. including an IDC of Rs,101.83 Cr based on 3rd Quarter, 2010 price level. The assets covered in the petition was scheduled to be commissioned within 32 months from the date of investment approval i.e. by 17.11.2013 say **01.12.2013**.

3. Time overrun:

As per the investment approval, the asset covered in the petition was scheduled to be commissioned by 01.12.2013. The asset covered under this petition and DOCO is given as funder:

Name of the Asset	Scheduled Commissioning as per investment approval	DOCO	Delay
Asset: 125 MVAR, 400kV Bus Reactor alongwith associated bays at Patna S/s	01.12.2013	01.08.2013	No delay

125 MVAR 400 kV Bus Reactor, is not covered in the scope of work.

There is no time over run.

3. Cost overrun:

- 3.1 The total estimated completion cost of the project, is **Rs 921.46 Lakh** against apportioned approved FR cost of **Rs 925.09 Lakh**, thus, **there is no cost overrun.**

4. Additional capital expenditure:

As per Form-9 of the petition, the details of cost as on DOCO and estimate additional capitalization projected to be incurred for the asset covered in this petition from DOCO to 31.03.2014, 2014-15 and 2015-16 are given below:

(Rs in Lakhs)

Name of the Asset	Projected Cost incurred as on DOCO (01.08.2013)	Projected Additional Capitalization			TOTAL Estimated completion cost
		DOCO to 31.03.14	2014-15	2015-16	
125 MVAR, 400kV Bus Reactor alongwith associated bays at Patna S/s	618.48	212.12	60.61	30.30	921.46

The petitioner has claimed add-cap under Regulation 9(1) of Tariff Regulations, 2009, on account of balance and retention payments, **which may be allowed.**

5. Claim of additional RoE:

In the petition, petitioner has submitted that as per Appendix-II of CERC Regulations' 2009, in case of a scheme having combination of the various types of projects, the qualifying time schedule of the activity having maximum time period shall be considered for the scheme as a whole. In line with this, the timeline for this project is same as for 400kV D/C Twin Transmission Line i.e. 34 months for Hilly Area from the date of investment approval. **As per provision under para 15 (2) under Chapter-3 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 for projects commissioned on or after 1st April, 2009, an additional return of 0.5% is being claimed for the subject asset for anticipated completion with the specified time. Additional RoE is not admissible without ascertaining the completion of work project in stipulated time.** Additional ROE is not admissible without ascertaining the completion of whole project in stipulated time.

6. Initial Spares

As per the petition, the Initial spares for the sub-station under this petition is 6.41% (approximately) which is higher than the percentage specified under provisions 8 of the CERC Regulations 2009. It is

submitted that the bay at Patna S/S is commissioned as **extension of existing sub station**. In a green field substation (i.e. new substation) normally a large number of bays are commissioned under single project and the spares are taken against these large numbers of bays. But in this case only one bay at Patna S/S is commissioned instead of such large number of bays and S/S equipment for green project. This means population of equipments & total capital cost for green field project is much higher than the project cost of an extension project. Even though similar type of spares have been procured for this system as is normally done for green field project, the percentage of cost of initial spares w.r.t the project capital cost for this system is higher because of less project capital cost due to lesser population of equipments in present project for each substation compared to projects having assets in green field substations. Hon'ble Commission may appreciate that initial spare norms in Regulation 2009 are for green field projects and not for small extension work.

7. Sharing of Transmission Charges:

Tariff for Transmission of Electricity (Annual Fixed Cost) of petition 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.

8. Information required from the petitioner:

1. 125 MVAR 400 kV Bus Reactor has not been covered in scope of the work/ investment approval. The reason/ justification for installation of bus reactor, its utility and approval by competent authority along with documentary evidence be provided.
2. Status of completion of other asset covered under scope of work approved by Board of Directors dated 17/3/2011.
3. Detailed justification for variation in cost under sub-head "Foundation for structures & Misc. civil works" by 78.53 % (Form 5B page 64 of petition).
4. Recommendation of OEM regarding quantum of initial spares for the subject asset. Initial spares have been claimed for green field substation. However, the bus reactor has been commissioned in the

existing sub-station for which there is no provision of initial spares. The reason / justification for claiming higher initial spares in view these facts be submitted.

5. Capital cost benchmarking data may be submitted.