

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 277/2009**

**Coram: Dr. Pramod Deo, Chairperson  
Shri S. Jayaraman, Member  
Shri V.S.Verma, Member**

**Date of Hearing: 23.2.2010**

**Date of order: 5.4.2010**

**In the matter of**

Approval under Regulation 24 read with Regulations 111 and 113 of Central Electricity Regulatory Commission (Conduct of Business) Regulation, 1999 for grant of regulatory approval and other relief for execution of evacuation system of Punatsangchu – I project of Bhutan

**And in the matter of**

Power Grid Corporation of India Ltd.

.....**Petitioner**

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited, Jaipur
2. Ajmer Vidyut Vitaran Nigam Limited, Jaipur
3. Jaipur Vidyut Vitaran Nigam Limited, Jaipur
4. Jodhpur Vidyut Vitaran Nigam Limited, Jaipur
5. Himachal Pradesh State Electricity Board, Shimla
6. Punjab State Electricity Board, Patiala
7. Haryana Power Purchase Centre, Panchkula
8. Power Development Department, Government of J&K, Jammu
9. Uttar Pradesh Power Corporation Limited, Lucknow
10. Delhi Transco Limited, New Delhi
11. BSES Yamuna Power Limited, New Delhi
12. BSES Rajdhani Power Limited, New Delhi
13. North Delhi Power Limited, New Delhi
14. Chandigarh Administration, Chandigarh
15. Uttarkhand Power Corporation Limited, Dehradun
16. North Central Railway, Allahabad
17. New Delhi Municipal Council, New Delhi
18. Madhya Pradesh Power Trading Company Limited, Jabalpur
19. Maharashtra State Electricity Distribution Company Limited, Mumbai
20. Gujarat Urja Vikas Nigam Limited, Vadodara
21. Electricity Department, Govt. of Goa, Goa
22. Electricity Department, Administration of Daman & Diu, Daman

23. Electricity Department, Administration of DNH UT, Silvassa  
24. Chhattisgarh State Electricity Board, Raipur  
25. Madya Pradesh Audyogik Kendra, Indore

.....**Respondents**

**The following were present:**

1. Shri Y.K.Sehgal, PGCIL
2. Shri Pankaj Kumar, PGCIL
3. Shri U.K.Tyagi, PGCIL
4. Shri Avinash M. Pavgi, PGCIL
5. Shri Padamjit Singh, Consultant, HPPCL
6. Shri TPS Bawa, Consultant, HPPCL
7. Shri Pramod Chowdhery, MPPTCL

**ORDER**

The petitioner, Power Grid Corporation of India Limited (PGCIL) has filed this petition seeking regulatory approval and other relief for execution of evacuation system of Punatsangchi-I projects of Bhutan. The Petitioner had also prayed for ensuring recovery of its capital investment by way of evolving alternate methodology.

2. The petitioner has submitted that with the harnessing of large hydro potential in the North Eastern Region, Sikkim and Bhutan, addition of generation capacity of 35000 MW in NER and 15000 MW in Sikkim and Bhutan are expected in near future. Considering the growth of power demand in NER, Sikkim and Bhutan, surplus power of the order of about 42000-45000 MW is estimated to be available from these areas, which would be required to be transmitted over long distances to the load centers of Northern/Western/Southern regions through the narrow corridor of chicken neck area located in north of West Bengal between the international borders of Bangladesh and Nepal having a length of about 18 Km and width of only about 22 Km. Keeping in view the future generation expansion, there is a necessity to plan the evacuation

system in a comprehensive manner so as to ensure optimal utilization of the transmission corridor in the chicken-neck area as well as difficult terrain of NER, Sikkim and Bhutan.

3. The Petitioner has further submitted that in NER, 2000 MW Lower Subansiri HEP of NHPC and 600 MW Kameng HEP of NEEPCO are scheduled for commissioning in January 2012 and December 2012 respectively. The allocation of power from these generation projects have been finalized and accordingly, the commercial agreements for these generation projects are in place with the constituents/ beneficiaries. For evacuation of power from these projects, a  $\pm$  800 kV 6000 MW HVDC Bi-polar line (NER-NR/WR HVDC interconnector – I) from Bishwanath Chariali to Agra with 3000 MW HVDC terminals at both ends has already been planned in consultation with Central Electricity Authority (CEA) and regional constituents/ beneficiaries.

4. The Petitioner has submitted that Bhutan has an estimated hydro potential of 21000 MW. As per the information available, a number of projects are likely to be commissioned in Bhutan and Sikkim. A number of projects like Punatsangchu-I (1200 MW), Punatsangchu-II( 1000 MW), Mangdechu (600 MW), Bunakha (180 MW), Wangchu (900 MW) Sankosh (4080 MW) in Bhutan have been identified to be implemented in the near future. An optimal transmission system for evacuation of the power from hydro projects in Bhutan has been planned, in consultation with CEA and Regional beneficiaries/constituents, by adding a 3000 MW HVDC terminal at Alipurduar, through which the power from these hydro projects shall be injected into Bishwanath Chariali – Agra HVDC line, which has already been planned. The details

of the transmission scheme, as agreed by the constituents of Northern Region and Western Region are as under:

- a) New 2x315MVA, 400/220kV AC & HVDC sub-station with  $\pm$  800kV, 3000 MW converter module at new pooling station at Alipurduar.
- b) Extension of  $\pm$  800 kV HVDC station with 3000 MW inverter module at Agra.
- c) LILO of Bishwannath Chariali – Agra HVDC line at new pooling station in Alipurduar for parallel operation of the HVDC station.
- d) LILO of Bongaigaon – Siliguri 400kV D/C line (quad) (Bongaigaon – Siliguri 400 kV D/C line under private sector) at new pooling station in Alipurduar.
- e) LILO of Tala-Siliguri 400 kV D/C line at new pooling station in Alipurduar.
- f) LILO of Birpara-Salakati 220 kV D/C line at new pooling station in Alipurduar.
- g) Punatsangchu-I (generation project in Bhutan) - Alipurduar 400 kV D/C line with quad conductor (Indian portion)

5. According to the Petitioner, the transmission system of Punatsangchu-I was discussed and agreed in the meetings of standing committees on transmission system planning of Northern Region, Western Region and Eastern Region held on 30.05.2009, 10.09.2009 and 14.09.2009 respectively. The prospective beneficiaries/buyers of this power from Northern and Western Regions agreed in their RPC meetings held on 27.06.2009 and 25.09.2009 respectively to share the transmission charges of the transmission system of Punatsangchu-I, provided power from the generation projects is allocated to them. The Petitioner had approached Ministry of Power for finalization of allocation of share of the constituents of Northern and Western Regions and it is expected that allocation of power from this generation project may take some more time.

6. The Petitioner has submitted that from the technical point of view, 3000 MW HVDC terminal each at Alipurduar and Agra for Puntsangchu-I HEP is required to be integrated with the 3000 MW HVDC terminal each at Bishwanath Chariali and Agra

planned for Lower Subansari and Kameng HEP project, which have already been planned. CEA in its various communications, has indicated and stressed upon the need and importance for simultaneous implementation of both the projects. CEA has cautioned that the implementation of the HVDC modules in different time-frames would cause interface related specifications to be defined and implemented with higher engineering efforts and related costs. CEA has recommended that implementation of both schemes at one go would be technically and commercially desirable. Accordingly, implementation of these projects has been taken up together by the Petitioner. The awarding process and the notice inviting tender (NIT) has already been issued in month of May, 2009 and the award of the project was planned in December 2009. The time schedule for implementation of the project is as under:

- a) 3000 MW HVDC terminal at Bishwanath Chariali and Agra : 48 Months
- b) 3000MW HVDC terminal at Alipurduar and Agra : 52 months

7. In order to proceed further with the award process, the investment approval of the Board of Directors of PGCIL is necessary, for which signing of commercial agreements to securitize the payment of transmission charges is a precondition. Since commercial agreements have not been signed, pending allocation of power by Ministry of Power from these projects, the Petitioner has sought the regulatory approval as per the provisions of para 7.1(4) of tariff policy notified by the Govt of India on 06.01.2006 under Section 3 of the Electricity Act, 2003. Para 7.1(4) provides as under:

“Prior agreement with beneficiaries would not be a precondition for network expansion. CTU/STU should undertake network expansion after indentifying the requirements in consonance with the National Electricity Plan and in

consultation with stakeholders, and taking up the execution after due regulatory approvals.”

8. The Petitioner has filed IA No.64/2009 praying for permission to the Petitioner to go ahead with the execution/ implementation of the transmission system for evacuation of power from Punatsangchu-I HEP, in view of the technical and commercial requirements.

9. Jodhpur Vidyut Vitaran Nigam Ltd. (JVVNL) and Ajmer Vidyut Vitaran Nigam Limited (AVVNL) have filed their replies to the petition. Both the respondents have submitted that the constituents of the Northern Region had agreed to share the transmission charges in Punatsangchu-I transmission system provided that power from the project is allocated to them. Moreover, as the transmission system utilization would be very low in the initial period of operation, it is necessary to decide the commercial modalities as to how the wheeling charges would be shared in the initial years and during the period transmission system is fully utilized.

10. During the hearing of the petition on 23.2.2010, the representative of Haryana Power Purchase Centre (HPPC) also raised its concern about mismatch between generation and transmission projects resulting in under-utilization of the transmission system during initial period and undue loading of transmission charges on the beneficiaries of the generation project coming up first and requested the Commission to address the issue of stranded transmission capacity before according regulatory approval. The representative of HPPC further submitted that though CEA had recommended execution of both the transmission projects simultaneously in its letter dated 23.8.2006, there is no need for taking up both the projects together as the

Punatsangchu-I generation project has been rescheduled to 2014-15 from the earlier schedule of 2011-12. The representative of MPPTCL submitted that it should not be made liable for non-recovery of capital investments by the petitioner in the dedicated transmission line as well as high capacity transmission system in the event of non-firming of the beneficiaries by the generators and its liability towards annual transmission charges should be proportionately restricted to the quantum of share in generation allotted to it. Regarding the apprehension of the Petitioner for recovery of transmission charges, it was pointed out that as per the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, the transmission charges associated with a generating station had to be shared between the beneficiaries of the station in accordance with the system of sharing of transmission charges approved by the Commission.

11. We have considered the submissions of the Petitioner and the respondents. The Petitioner has approached the Commission under Regulations 24, 111 and 113 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 (herein after "Conduct of Business Regulations"). The regulations are extracted hereunder:

“24. The Commission may initiate any Proceedings suo motu or on a Petition filed by any affected or interested person.

111. Nothing in these Regulations shall be deemed to limit or otherwise affect the inherent power of the Commission to make such orders as may be necessary for ends of justice or to prevent the abuse of the process of the Commission.

113. Nothing in these Regulations shall, expressly or impliedly, bar the Commission to deal with any matter or exercise any power under the Act for which no Regulations have been framed, and the Commission may deal with such matters, powers and functions in a manner it thinks fit.”

12. The Petitioner, being an interested person, has filed this petition for regulatory approval of the transmission project. Under clause (c) of sub-section (2) of Section 38 of the Act, the Petitioner, being the Central Transmission Utility, is vested with the function "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". In order to facilitate development of the transmission system for evacuation of power from the upcoming generating stations in the North Eastern Region, Bhutan and Sikkim consistent with their date of commercial operations, the Petitioner has approached the Commission for regulatory approval which is consistent with its functions under Section 38(2)(c) of the Act. The Commission has the power under Section 79(1)(c) of the Act to regulate inter-State transmission of electricity. The Hon'ble Supreme Court in K Ramanathan Vs State of Tamil Nadu {(1985)2SCC116} has explained the scope of the 'power to regulate' as under:

"19. It has often been said that the power to regulate does not necessarily include the power to prohibit, and ordinarily the word 'regulate' is not synonymous with the word 'prohibit'. This is true in a general sense and in the sense that mere regulation is not the same as absolute prohibition. At the same time, the power to regulate carries with it full power over the things subject to regulation and in absence of restrictive words, the power must be regarded as plenary over the entire subject. It implies the power to rule, direct and control, and involves the adoption of a rule or guiding principle to be followed, or the making of a rule with respect to the subject to be regulated."

13. It would be clear from the above that the Commission, which has been entrusted with the functions to regulate inter-State transmission of electricity, has got the plenary power over inter-State transmission including the power to accord approval for regulated development of the inter-State transmission system. Regulation 113 of the Conduct of Business Regulations empowers the Commission to deal with any matter or exercise any power under the Act for which no regulation has been framed in any



manner that the Commission thinks fit. The Commission is yet to finalise and notify the regulation dealing with the procedure for regulatory approval. However, pending notification of regulations, the Commission has the power to accord regulatory approval if it is in accordance with the provisions of the Act and National Electricity Policy and Tariff Policy. Thus, the present petition is maintainable under Regulation 24 and 113 of the Conduct of Business Regulations and the Commission has the power under Section 79(1)(c) of the Act to accord regulatory approval for execution and implementation of the inter-State transmission system.

14. Para 5.3 of the National Electricity Policy notified under Section 3 of the Act vide Ministry of Power, Government of India Resolution No. No. 23/40/2004-R&R (Vol.II) dated 12.2.2005 recognises that the Transmission System requires adequate and timely investments and also efficient and coordinated action to develop a robust and integrated power system for the country by augmenting adequate transmission capacity, keeping in view the massive increase planned in generation and for development of power market. While planning new generation capacities, requirement of associated transmission capacity would need to be worked out simultaneously in order to avoid mismatch between generation capacity and transmission facilities. The policy enjoins upon the CTU the responsibility for planning and development of the national and regional transmission system. The Policy further emphasizes the need for network expansion as under:

“Network expansion should be planned and implemented keeping in view the anticipated transmission needs that would be incident on the system in the open access regime. Prior agreement with the beneficiaries would not be a pre-condition for network expansion. CTU/STU should undertake network expansion after identifying the requirements in consultation with stakeholders and taking up the execution after due regulatory approvals.”

Para 7.1.4 of the Tariff Policy notified vide Govt. of India Ministry of Power Resolution No. No.23/2/2005-R&R (Vol.III) dated 6.1.2006 reiterates the need for network expansion after obtaining regulatory approval as under:

“In view of the approach laid down by the NEP, prior agreement with the beneficiaries would not be a pre-condition for network expansion. CTU/STU should undertake network expansion after identifying the requirements in consonance with the National Electricity Plan and in consultation with stakeholders, and taking up the execution after due regulatory approvals.”

15. From the above discussion, it emerges that the CTU has been enjoined with the responsibility to plan the associated transmission capacity at the regional and inter-State levels commensurate with the planning of generation capacity in order to avoid a mismatch between generation capacity and transmission facilities. In the absence of prior agreement with beneficiaries, the CTU can undertake planned network expansion after taking regulatory approval if the requirement for network expansion has been identified in consonance with the National Electricity Plan and in consultation with the stakeholders.

16. During the hearing of the petition on 23.2.2010, we had directed the Petitioner to submit information regarding generation capacity for which the transmission system was being made and the commissioning schedules of the generating stations. The Petitioner in its affidavit dated 10.3.2010 has submitted that the generation projects in Bhutan are being executed by Punatsangchhu – I Hydroelectric Project Authority (PHPA). As per the Contract Agreement between PHPA and M/s BHEL, the unit-wise commissioning of six units of the project are 4.8.2014, 4.10.2014, 4.11.2014, 4.12.2014, 4.2.2015 and 4.4.2015. It has been clarified that the station commissioning

complete with water conductor system of Punatsangchhu-I HEP may be considered as 11.11.2015. It has also been clarified that the evacuation arrangement on Bhutanese side will be undertaken by Bhutanese Authority and as per the decision in the 6<sup>th</sup> meeting of PHPA held on 22.8.2009, the Ministry of Power has directed the Petitioner for development of the transmission system for the India side of Punatsangchhu-I project.

17. On perusal of the documents on record, we note that the Punantsangshu –I transmission system has been approved in the Meetings of the Standing Committee on Transmission System Planning of Northern Region, Western Region and Eastern Region and the Regional Power Committee meetings of Northern Region and Western Region. In the said meetings, the constituents have agreed to share the transmission charges of the scheme subject to allocation of powers from the Bhutan projects to the Regions. Thus the transmission system for which regulatory approval has been sought has been planned in consultation with Central Electricity Authority and the constituents of the beneficiary regions.

18. The Punantsangshu –I transmission system and the transmission system linked with Lower Subansiri and Kameng HEP have been planned to be implemented together to ensure compatibility and cost effectiveness. Taking into consideration the fact that the Punatsangchhu-I HEP is being jointly promoted by the Indian Government and the Royal Govt. of Bhutan and the tight time schedule for implementation of the project, we are of the view that Punantsangshu–I transmission system needs to be implemented matching with the commissioning schedule of the Punatsangchhu-I HEP. Accordingly, we accord the regulatory approval for execution of the Punantsangshu–I transmission

scheme as per the project scope mentioned under para 4 of this order. The petitioner is directed to ensure that the transmission project is executed within the approved time frame matching with the commissioning schedule of the Punatsangchu-I HEP so that the beneficiaries are not burdened with higher IDC. The Petitioner has also prayed for ensuring recovery of its capital investment by way of evolving alternate methodology. It is clarified for the benefit of all concerned that the transmission charge and its sharing by the constituents will be determined by the Commission in accordance with the applicable regulations on terms and conditions of tariff as specified by the Commission from time to time.

19. Petition No.277/2009 alongwith IA No. 64/2009 are disposed of in terms of our directions above.

**Sd/  
(V.S.VERMA)  
MEMBER**

**Sd/  
(S.JAYARAMAN)  
MEMBER**

**Sd/  
(DR.PRAMOD DEO)  
CHAIRPERSON**