CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Coram
1. **Shri Bhanu Bhushan, Member**
2. **Shri Rakesh Nath, Member(EO)**

Petition No. 146/2006

In the matter of

TNEB seeking directions for the method of charging transmission charges in case of extending supply from the existing Powergrid sub-station and for LILO of existing transmission line for laying and establishment of new lines and sub-stations by State Sector investing its own resources.

And in the matter of

Tamil Nadu Electricity Board, Chennai **……Petitioner**

Vs.

Power Grid Corporation of India Limited, Gurgaon **……Respondent**

The following were present:

1. Shri S. Sowmyanarayanan, TNEB
2. Shri S. Ganasekaran, TNEB
3. Shri Dilip Rozekar, POWERGRID
4. Shri U. K. Tyagi, POWERGRID
5. Shri R. Prasad, POWERGRID

Order
(Date of Hearing: 1.5.2007)

The petitioner has filed the present application for directions to the respondent, regarding the methodology to be adopted for settling the transmission charges for supply from the respondent's existing sub-stations and for LILO of

existing transmission lines for new lines and sub-stations to be constructed by the petitioner with its own resources.

2. The petitioner has submitted that it has been entrusted with the responsibilities of generation, transmission and distribution of power within the State of Tamil Nadu, besides purhase of power from the central generating stations. The power from the central generating stations and its import from outside the region is evacuted through the 400 kV network owned and operated by the respondent. The petitioner has planned to establish three new 400 kV sub-stations at Sunguvarchatram, Sholinganallur and Tirunelveli to meet additional requirement of power in the areas served by these sub-stations and to transfer surplus power from southern part to northern part of the State grid. The proposal was approved by CEA in the Standing Committee meeting held on 22.1.2007. The investments for the proposed sub-stations would be made from internal resources of the petitioner and through the contribution by the State Government. The three sub-stations have been planned to be established in the following manner:

(a) Supply to Sunguvarchatram is proposed to be by LILO of 400 kV S/C Sriperumpudur-Kalivanthapattu line owned by the respondent.

(b) For Sholinganallur sub-station, the feeding arrangement will be from the respondent's Kalivanthapattu 400 kV sub-station (under construction) by laying a new 400 kV double circuit line from Kalivanthapattu to Sholinganallur.

(c) The feeding arrangement to Tirunelveli sub-station will be from the respondent's 400 kV Tirunelveli sub-station presently under execution under the Kundankulam APP evacuation scheme.

3. Since the feeding arrangement to the proposed sub-stations of the petitioner is from the existing sub-stations of the respondent, the petitioner approached the respondent for its concurrence to the proposal. The respondent, however, advised the petitioner to seek long-term open access from the Central Transmission Utility. Incidentally, the respondent itself has been notified as the Central Transmission Utility. Being aggrieved by the response of the respondent, the petitioner has approached the Commission for suitable direction in the matter. The petitioner has submitted that since the sub-stations and the associated lines are proposed to be executed by the petitioner by ploughing its own resources, there is no requirement to obtain long-term open access from the Central Transmission Utility for establishment of the sub-stations and transmission lines. The petitioner has proposed that it would pay to the respondent only for maintenance of the equipments erected inside the respondent's sub-stations.

4. The respondent in its reply has submitted that the petitioner has wind generation of about 2700 MW and about 500 MW generating capacity has been proposed to be added annually. For evacuation of power from wind generators, the petitioner has proposed to establish a new 400 kV sub-station at Tirunelveli and inter-connect it to Tirunelveli sub-station of the respondent, which is under construction. The respondent is apprehensive that in view of injection of substantial quantum of power from such generation and use of the inter-State transmission system for its disbursal, lines of the respondent may be overstressed. There is,

therefore, according to the respondent, a necessity for comprehensive study as well as augmentation of the system to meet the additional requirements of the petitioner.

5. The petitioner during the hearing submitted that the transmission systems associated with Chennai NTPC-TNEB JV TPS (1000 MW) and Kundankulam APP are in pipeline. Simultaneously, it would also construct its 400 kV network to utilize power from Kundankulam APP. The representative of the petitioner was of the view that when transmission system associated with Kundankulam APP and their own 400 kV network are in place, there might not be any injection of power from its wind generators into the respondent's system. But this will take about 5 years and till then power injection of up to 500 MW might take place.

6. Keeping in view the requirement of injection of 500 MW power in the respondent's transmission system, we had directed the petitioner to place on record its plan and programme for augmentation of 400 kV/220 kV network for evacuation of power from the proposed wind based generation in Tirunelveli area. We had also directed the respondent to confirm availability of a margin of 500 MW on its upcoming transmission system in the vicinity of Tirunelveli sub-station for wind power, which may have to be carried.

7. The petitioner in its affidavit dated 15.5.2007 has submitted that it had sent proposals to CEA on 5.12.2006 and 27.4.2007 to connect Tirunelveli (Kanarpatty) 400 kV sub-station to Kayathar 400 kV sub-station, and in the second phase Pugalur sub-station would be connected to Sunguvarchatram 400 kV sub-station by a direct 400 kV D/C transmission line. This would eventually take care of evacuation of

power from Cuddalore Thermal Power Station with an installed capacity of 1320 MW. Regarding the load flow studies carried out by CEA for sanctioning the Tirunelveli 400 kV sub-station, the petitioner has informed that generation of 2050 MW from wind generators in that area has been considered and power through the auto transformer at Tirunelveli 400 kV sub-station is around 612 MW for a peak generation of 2050 MW at various locations in and around that area.

8. The respondent in its affidavit dated 16.5.2007 has submitted that load flow studies have been carried out corresponding to the year 2010-11 condition, when Kundankulam (2000 MW), Tuticorin JV (1000 MW), Neyveli TS-II Expn. (500 MW), North Chennai JV (1000 MW) along with their transmission systems shall be available. Three scenarios i.e. no injection, 500 MW injection and 1000 MW injection have been considered and it is found that with injection of 500 MW loading on Tirunelveli-Madurai-Pugalur transmission line under normal as well as one circuit outage condition remains well within limits. Therefore, the respondent has submitted, 500 MW power injection from wind power generation at Tirunelveli sub-station as proposed by the petitioner can be handled.

Analysis

9. We have gone through the written pleadings of the parties. We note that the basic grievance of the petitioner is that it has been advised by the respondent to seek long- term open access when the former approached the latter for its concurrence for tapping of supply from the respondent's sub-stations/lines. The petitioner's contention is that it should not be necessary to seek long-term open access, while seeking only connectivity to the respondent's system.

10. The Commission's considered view is that optimum development of transmission systems requires a close and cordial coordination between CTU, STU and CEA. In fact, this is the intent of the planning policy laid down in the IEGC, which inter-alia provides for future plans to be discussed in the Regional Standing Committee for Transmission Planning constituted by CEA, in consultation with beneficiaries, CTU, RPC, CEA and RLDC. Section 38 (2) (b) and 39 (2) (b) of the Electricity Act, 2003 also stipulate that CTU and STU shall co-ordinate with each other and with other agencies to discharge all functions of planning and co-ordination relating to transmission system. We note that proposal of the petitioner was discussed and agreed to in the 23rd meeting of the Standing Committee of Southern Region on Power System Planning held on 22nd January 2007 and we will be relying on the same.

11. The Commission would also like to clarify that long-term open access over a transmission system is required only when one is seeking a reservation or priority in use of an existing system, or system augmentation to cater to its projected requirement. We find that in case of connectivity sought by TNEB for Sunguvarchatram and Shollinganallur substations, the issue relates only to additional connectivity for meeting growing loads around Chennai. Such case of connectivity to points of drawal can be granted without going through the process of open access as it would only lead to redistribution of power flows on the network then existing.

12. As for the connectivity of TNEB's system with Tirunelveli substation of Powergrid, we feel that this too would be desirable for stabilising the system. Once

established, it could also be used for wheeling wind generation through Powergrid's network up to Chennai (Sunguvarchatram and Shollinganallur) as long as the Powergrid network has the required surplus transmission capacity. TNEB shall not claim a transmission right or priority over the Powergrid network (in the name of zero-cost, eco-friendly, renewable power, which wind generation is), unless it has applied for and has been granted the required "open access" for using this transmission corridor. Therefore, TNEB should seek "open access" for the requisite quantum (MW) and duration for wheeling power from Tirunelveli to appropriate points, depending on their own transmission development plan vis-à-vis wind generation enhancement time frame. We are aware that wind generation quantum is highly variable and unpredictable, and that all available energy should be absorbed in the grid. This makes it all the more necessary for TNEB to judiciously assess the wind generation availability and consequent "open access" requirement.

13. The respondent's legitimate concern about overstressing of its system in the long-run thus stands addressed. The petitioner has clarified that it shall develop its own transmission links in due course, and power flow over the respondent's system due to petitioner's wind generation shall be limited to about 500 MW. The respondent has confirmed after load flow studies that such power flow can be accommodated by its system subject to the required "open access" formalities. In view of this, we find no valid ground for the respondent for holding back its consent for connectivity sought, particularly when it has been approved by the CEA, and the petitioner has categorically declared that all costs associated with its proposal, including those for new substation bays and line LILO would be borne by it.

14. We expect that the parties shall mutually agree on detailed modalities regarding technical specifications for sub-station extension and line LILO (in case the work is not got done by the respondent on deposit basis), and O&M charges to be paid by the petitioner to the respondent, as per the prevailing practice under similar circumstances for such situations commonly arising between the respondent and STUs/generating companies.

15. Before parting with this case, it would be worthwhile for us to differentiate between providing connectivity to the transmission system and allowing usage of the transmission system through short-term/long-term open access. It is possible that during planning/execution stage, a generating company/licensee may just seek connectivity in the first instance. This will help the generating company/licensee to plan/execute dedicated transmission system up to the grid. However, the generating company/licensee may be able to firm up its delivery/injection points at a later date, and be able to apply for open access at that stage only. Thus, connectivity may be seen as a pre-cursor to the open access. The requirement of connectivity of this nature was not envisaged previously and, therefore, the Commission's regulations on open access did not cater for these situations. The requests for connectivity from all such persons who are eligible to buy/sell as per the Electricity Act, 2003 should normally be disposed off within one month of receipt of such requests. While granting permission to connect to the system, reasonable broad design requirements may be intimated to the person seeking connection. It is needless to say that the person seeking connectivity must agree to:

(i) Comply with Indian Electricity Grid Code;

(ii) Reimburse the cost of inter-connection bay including bus extensions etc;

(iii) Pay O&M expenses for inter-connection bay; and

(iv) Apply for required “open access” in due course, but in good time, and not take for granted its approval.

16. This disposes Petition No. 146/2006.

Sd/-
(RAKESH NATH)
MEMBER(EO)

Sd/-
(BHANU BHUSHAN)
MEMBER

New Delhi, dated the 27th June, 2007