

**PUNJAB STATE ELECTRICITY REGULATORY COMMISSION  
SCO 220-21, SECTOR – 34-A, CHANDIGARH**

**Petition No. 38 of 2014  
Date of Order: 21.08.2014**

In the matter of: Regulation 22 of the Punjab State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2005 as amended by Punjab State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff), second amendment Regulations, 2012 notified vide Notification dated 17<sup>th</sup> September, 2012.

**AND**

Approval of Capital Expenditure exceeding Rs. 20 Crore for the Transmission Schemes to be executed by PSTCL for system improvement and power disposal – 220 kV Ladowal Sub-Station.

In the matter of: Punjab State Transmission Corporation Limited, The Mall, Patiala-147001.

Present: Smt.Romila Dubey, Chairperson  
Shri Virinder Singh, Member  
Shri Gurinder Jit Singh, Member

**ORDER**

Punjab State Transmission Corporation Limited (PSTCL) filed this petition for seeking approval of the Commission for its Transmission Scheme, with Capital Expenditure exceeding ₹20 crore, in terms of Regulation 22 (6) (ii) of Punjab State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2005, as amended vide second amendment notified vide Notification dated 17<sup>th</sup> September, 2012. The scope of the scheme required for System Improvement and Power Dispersal is as under:-

- (i) 220 kV Sub-Station Ladowal (New) with 1 x 160 MVA, 220/66 kV Transformer

- (ii) 220 kV Nakodar (400 kV) – Ladhowal DC line. Line length of 40 Km, with 0.5 sq. inch ACSR conductor size and allied works
- (iii) LILO of one circuit of 220 kV Humbran – Ferozepur Road, Ludhiana line at 220 kV Sub-Station Ladowal. LILo length of 17 Km DC line with 0.4 sq. inch ACSR conductor size and allied works.

This scheme has been planned to provide relief to the existing 220 kV Sub-Stations of Ludhiana area, most of which are loaded almost to their full capacity. 220 kV connectivity to 220 kV Sub-Station Ladowal has been proposed from two sides to increase the reliability of the system. The Sub-Station shall be connected to two 400 kV sources (i.e. one directly from 400 kV Nakodar and other with 400 kV PGCIL Ludhiana via 220 kV Lalton kalan indirectly). 66 kV Sub-Station Baloke, 66 kV Sub-Station Haibowal, 66 kV Sub-Station Bahadare (Dana Mandi) and 66 kV Sub-Station Amaltas which are presently fed from 220 kV Sub-Station Humbran, shall be connected to the proposed 220 kV Sub-Station Ladowal.

1. The petition was admitted vide Order dated 24.06.2014 and PSPCL was made respondent in the petition. After scrutiny of the petition, the Commission observed as under:

- (i) *“Load Flow Studies corresponding to year 2014 & 2017 have not been attached.*
- (ii) *Present loading position of 220 kV Humbran, 220 kV Ferozepur Road, 220 kV Lalton Kalan and other nearby 220/132 kV Sub-Stations and connected 66 KV Sub-Stations have not been submitted.*
- (iii) *Load Flow studies should be carried out for the year 2017 by including the schemes which have been approved recently by the Commission.*
- (iv) *The possibility of feeding proposed 220 kV Sub-Station Ladhowal from 220 kV Sub-Station Noormahal should also be examined in order to save the cost of feeding lines as proposed in the petition.”*

PSTCL was directed to file the reply to the observation/queries by 15.07.2014, with a copy to PSPCL. PSPCL was also directed to file its response by 30.07.2014.

2. PSTCL filed its reply to the observations of the Commission, vide letter dated 09.07.2014 and submitted as under:-

- (i) Load Flow Study reports corresponding to the year 2014 and year 2017 have been attached.
- (ii) Present loading position of 220 kV Humbran, 220 kV Ferozepur Road, 220 kV Lalton Kalan and other nearby Sub-Stations have been supplied. Loading position of various 66 kV Sub-Stations of the area as given by PSPCL to PSTCL has also been supplied by PSTCL.
- (iii) Load Flow Studies for the proposed system up to the year 2017 have been carried out by including the earlier schemes approved by PSERC.
- (iv) The possibility of feeding 220 kV Sub-station Ladowal from 220 kV Noormahal has been studied by PSTCL, keeping in view that LILO of 220 kV Ferozepur Road –Humbran at 220 kV Ladowal shall also be in circuit and has submitted that Right of Way for 220 kV Noormahal - Ladowal line having line length of 34 Km is available along with space for 2 No. 220 kV bays at Noormahal.

Study report with proposed connectivity from 220 kV Noormahal alongwith a brief sketch has been supplied by PSTCL. As per Load Flow Study report, power can be evacuated with this option, but there will be increase in peak load losses of about 0.8 MW. PSTCL has further submitted as under:-

- (a) Although an amount of ₹4.20 crore will be saved on account of reduced line length, but at the same time it will cost ₹1.97 crore extra annual financial burden on account of increased system losses and the initial extra cost incurred on the system shall be recovered in a pay back period of two years two months approximately.
- (b) At present 220 kV Sub-Station Noormahal has 1 x 100 MVA, 220/66 kV Transformer and second 100 MVA, 220/66 kV Transformer is likely to be added in the near future. With this, the power evacuation for 220 kV Ladowal- Ferozepur Road and 220 kV Ladowal – Humbran sections shall be limited to the power carrying capacity of 220 kV Nakodar (400

kV)-Noormahal link as well as loading of 220 kV Noormahal Substation.

4. PSPCL has also filed its reply vide Chief Engineer/ARR & TR memo no. 5879 dated 28.07.2014, as under:-

- (i) PSPCL is in agreement with the contention of PSTCL as put forth by them in the petition. Out of the two options to feed 220 kV Sub-Station Ladowal, the option to feed 220 kV Sub-Station Ladowal from 400 kV Sub-station Nakodar is recommended by PSPCL, as it is in line with the decision taken in the 8<sup>th</sup> meeting on 09.05.2014 of Transmission Planning Committee.

5. Further hearing in the case was closed after hearing PSTCL and PSPCL on 05.08.2014 and order was reserved.

After examining the submissions made by PSTCL and PSPCL, the Commission approves the scheme as under:

- i) Erection of 220 kV Sub-Station Ladowal (New) with 1 x 160 MVA, 220/66 kV Transformer
- ii) 220 kV Nakodar (400 kV) – Ladowal DC line. Line length of 40 Km, with 0.5 sq. inch ACSR conductor size and allied works
- iii) LILO of one circuit of 220 kV Humbran – Ferozepur Road, Ludhiana line at 220 kV Sub-Station Ladowal. LILO length of 17 Km DC with 0.4 sq. inch ACSR conductor size and allied works.

PSTCL shall ensure proper implementation of the scheme by following the laid down procedure for procurement of material/award of work and that all the statutory/legal clearances shall be obtained.

PSPCL shall match commissioning of all 66 kV works required for dispersal of power from proposed 220 kV Sub-Station Ladowal with its commissioning schedule.

The Commission has observed that 220 kV Sub-Station Kotla Jangan is presently being fed from Kartarpur. The possibility of linking this Sub-Station with 400 kV Sub-Station, Nakodar should also be examined by PSTCL.

The petition is disposed of accordingly.

**Sd/-**

**(Gurinder Jit Singh)**  
**Member**

**Sd/-**

**(Virinder Singh)**  
**Member**

**Sd/-**

**(Romila Dubey)**  
**Chairperson**

**Chandigarh**  
**Dated: 21.08.2014**