

**Before**

**UTTARAKHAND ELECTRICITY REGULATORY COMMISSION**

**Petition No. 06 of 2019**

**And**

**Petition No. 07 of 2019**

**In the Matter of:**

Approval of Capital Investments under Para 11 of the Transmission for:

- (i) Construction of 2x50 MVA 220/33 kV GIS Substation, Selaqui, Dehradun & its associated LILO of 220 kV Khodri-Jhajhra line at proposed 220/33 kV S/s Selaqui, Dehradun.
- (ii) Increasing Capacity of 132 KV Manglore Substation by Procurement, Installation & Commissioning of 132/33 kV, 80 MVA Transformer.

And

**In the Matter of:**

Power Transmission Corporation of Uttarakhand Limited (PTCUL)

**Coram**

**Shri Subhash Kumar      Chairman**

**Date of Order: March 12, 2019**

**ORDER**

This Order relates to the Petitions filed by Power Transmission Corporation of Uttarakhand Ltd. (hereinafter referred to as "PTCUL" or "the Petitioner") seeking investment approval of the Commission for the following works:

- (i) Construction of 2x50 MVA 220/33 kV GIS Substation, Selaqui, Dehradun & its associated LILO of 220 kV Khodri-Jhajhra line at proposed 220/33 kV S/s Selaqui, Dehradun.
- (ii) Increasing Capacity of 132 KV Manglore Substation by Procurement, Installation & Commissioning of 132/33 kV, 80 MVA Transformer.

## 1. Background

- (1) The Petitioner has submitted proposals for approval of capital investment of aforesaid works under Para 11 of Transmission Licence [Licence No. 1 of 2003] vide letter no. 19/Dir.(Projects)/PTCUL/Investment Approval dated 04.01.2019 and No. 2579/MD/PTCUL/UERC dated 03.12.2018.
- (2) The estimated cost of the work proposed by the Petitioner in the DPR submitted alongwith the Petitions is as follows:

**Table 1: Project wise cost proposed by the Petitioner**

| Sl. No | Particulars   | Transformer Capacity          | Project Cost excluding IDC as per DPR (Rs. Crore) | Project Cost including IDC as per DPR (Rs. Crore) |
|--------|---|-------------------------------|---|---|
| 1(a)   | Construction of 2x50 MVA, 220/33 kV GIS Substation Selaqui, Dehradun  | 2x50 MVA                      | 103.95  | 114.25  |
| 1(b)   | LILO of 220 kV S/C of Khodri-Jhajra Line at proposed 220 kV Selaqui, Dehradun with underground cable                            | -                             | 45.68   | 50.21   |
| 2      | Increasing Capacity of 132 KV Manglore Substation by Procurement, Installation & Commissioning of 132/33KV, 80 MVA Transformer. | 2x40 MVA to 1x40 MVA+1x80 MVA | 12.32   | 12.63   |
|        | <b>Total</b>  |                               | <b>161.95</b>                                     | <b>177.09</b>                                     |

- (3) The Petitioner has submitted copy of extracts of the 64<sup>th</sup> & 65<sup>th</sup> Minutes of BoD Meetings of PTCUL held on 27.09.2018 & 28.11.2018 respectively, wherein the Petitioner's Board has approved the Corporation's aforesaid proposals amounting to Rs. 177.09 Cr. with a funding pattern of 70% through loan assistance by Financial Institutions and balance 30% as equity funding from GoU.

(4) To justify the need of the works proposed in the above Petitions, the Petitioner has submitted that:

**(a) Construction of 2x50 MVA, 220/33 kV GIS Substation Selaqui, Dehradun & its associated LILO of 220 kV Khodri-Jhajhra line**

The Petitioner has submitted that Selaqui area has an industrial area having many industrial units which need continuous and reliable power supply. Presently, Selaqui and its nearby area is fed from 220/132/33 kV S/s Jhajhra. With the construction of the proposed 220 kV Substation, 33/11 kV Substation, Selaqui shall have two sources of 33 kV supply, one from existing 220/33 kV Jhajhra, and another from the proposed 220 kV Substation, Selaqui. Further, the length of 33 kV feeder feeding 33/11 kV Substation, Selaqui shall also reduce which shall ensure quality and reliability of power to the industrial units situated in the area. Moreover, the proposed GIS Substation shall cater to the prospective load demand in around Selaqui area in the years to come.

The Petitioner has submitted the System Study/Technical Feasibility Report on the basis of which PTCUL in the initial stage has proposed to shift the following 33 kV feeders from 220/132/33 kV Substation Jhajra.

| Sl. No. | Name of Feeder        | Capacity (in MVA) |
|---------|-----------------------|-------------------|
| 1.      | 33/11 kV Selaqui-II   | 20 MVA            |
| 2.      | 33/11 kV Pharmacity   | 32.5 MVA          |
| 3.      | 33/11 kV Linde        | 8 MVA             |
|         | <b>Total capacity</b> | <b>60.5 MVA</b>   |

PTCUL has stated that after the proposed shifting of 33/11 kV feeders the remaining connected capacity of existing 33/11 kV feeders shall be only 97 MVA against 132/33 kV capacity of 160 MVA at 220 kV S/s Jhajra.

Further, according to PTCUL, tentative power flow under normal as well as N-1 condition shall be as given below:

| Sl. No. | Name of Transmission lines | Tentative Power flow (in MW) in normal condition | N-1 (Outage of 220 kV Khodri-Selaqui line) | N-1 (Outage of 220 kV Selaqui-Jhajra line) |
|---------|----------------------------|--|--|--|
| 1       | 220 kV Khodri-Selaqui line | 44   | 0  | 50   |
| 2       | 220 kV Selaqui-Jhajra line | 5  | 50   | 0  |

**(b) Increasing Capacity of 132 KV Manglore Substation by Procurement, Installation & Commissioning of 132/33KV, 80 MVA Transformer.**

The Petitioner has submitted that 2x40 MVA, 132 kV S/s Manglore is an important Substation of Haridwar District catering to the load of Manglore Industrial as well as nearby areas of Manglore. Presently, the average maximum load on each Transformer is approx 170 Ampere which is almost 97% of its capacity, and the load demand is rapidly increasing year by year. The Petitioner further submitted a letter dated 19.06.2018 of Distribution Licensee (UPCL) wherein UPCL has desired the need of increase in the capacity of various Substations including 132/33 kV S/s Manglore.

The Petitioner has also taken cognizance of the Commission's Order dated 12.09.2018 in which the Commission has directed the Petitioner to review its proposed plan for augmenting the transformation capacity of 132 kV S/s Manglore from 2X40 MVA to 1X40 MVA+1X80 MVA taking into consideration the induction of the 66/33 kV S/s Manglore in the network. The Petitioner submitted that 66/33 kV S/s Manglore is connected to 66 kV double circuit Mohammadpur-Ramnagar (Roorkee) line through LILO arrangement but due to constraint on loading of the said line this Substation shall not be able to cater more than 15 to 20 MW in low hydro conditions. Therefore, to meet out the present and future demand of Manglore industrial and nearby area, it is imperative that capacity enhancement of 132 kV Substation be done at the earliest.

The Petitioner submitted that due to constraint in space construction of additional transformer bay at 132/33 kV S/s Manglore cannot be erected and therefore, 80 MVA transformer is proposed to be installed in place of the existing 40 MVA Transformer. The replaced 40MVA transformer shall be used in other existing substation for augmentation as per requirement.

- (5) With regard to rates for procurement of transformer and erection & commissioning for the proposed works, the Petitioner submitted that the rates has been taken from PTCUL's approved Rate Schedule of 2016-17.

## 2. Commission's observations, Views and Decision

(6) On examining the Petitions, project-wise observations are as follows:

**(a) Construction of 2x50 MVA, 220/33 kV GIS Substation Selaqui, Dehradun & its associated LILO of 220 kV Khodri-Jhajhra line**

It is observed that as per the information provided by the Petitioner, connected load at existing 2x80 MVA, 220/132/33 kV S/s Jhajhra is around 157.5 MVA which is approximately 97% of total capacity of the transformers. To meet the T-1 contingency and also the prospective load growth in and around Selaqui area, the Commission feels that the proposal submitted by the Petitioner is justified and there is a necessity of a new 220 kV Substation at Selaqui.

**(b) Increasing Capacity of 132 KV Manglore Substation by Procurement, Installation & Commissioning of 132/33KV, 80 MVA Transformer.**

On examination of the submissions of PTCUL, it has been observed that 02 nos. 40 MVA installed at 132 kV Substation Manglore are overloaded. Keeping in view the future load growth and to meet the present load demand, augmentation of 132 KV Manglore Substation is essential.

(7) With regard to financial aspects of the aforesaid projects, the Petitioner submitted 70% funding from loan through Financial Institutions but the Petitioner had not provided any documentary evidence or assurance from financial institution for funding of this project.

(8) Further, it has also been observed that while preparing the estimate for the DPR, the Petitioner in addition to contingency and cost of establishment, audit & accounting has added quantity variation, cost escalation @ 20% and IDC in the estimate. In absence of any justified reasons for including quantity variation and cost escalation, the Commission is not considering the same as of now.

(9) Based on the above, against the Petitioner's proposed capital expenditure of Rs. 177.09 Crore, the Commission hereby grants in-principle approval for the expenditure of Rs. 127.87 Crore only as per Table 2 given below with the

direction that the Petitioner should go ahead with the aforesaid works subject to fulfillment of the terms & conditions mentioned in Para 10 below.

**Table 2: Project wise cost proposed by the Petitioner vis-a-vis cost considered by the Commission**

| Sl. No | Particulars   | Transformer Capacity          | Project Cost including IDC as per DPR (Rs. Crore) | Cost considered by the Commission including IDC (Rs. Crore) |
|--------|---|-------------------------------|---|---|
| 1(a)   | Construction of 2x50 MVA, 220/33 kV GIS Substation Selaqui, Dehradun  | 2x50 MVA                      | 114.25  | 82.71   |
| 1(b)   | LILO of 220 kV S/C of Khodri-Jhajra Line at proposed 220 kV Selaqui, Dehradun with underground cable                            | -                             | 50.21   | 36.29   |
| 2      | Increasing Capacity of 132 KV Manglore Substation by Procurement, Installation & Commissioning of 132/33KV, 80 MVA Transformer. | 2x40 MVA to 1x40 MVA+1x80 MVA | 12.63   | 8.87  |
|        | <b>Total</b>  |                               | <b>177.09</b>                                     | <b>127.87</b>   |

(10) Terms and conditions subject to which in-principle approval granted by the Commission are as follows:

- (i) All the loan conditions as may be laid down by the funding agency in their detailed sanction letter are strictly complied with.
- (ii) The Petitioner shall, within one month of the Order, submit letter from the State Government or any such documentary evidence in support of its claim for equity funding agreed by the State Government or any other source in respect of the proposed schemes.
- (iii) After completion of the aforesaid schemes, the Petitioner shall submit the completed cost and financing of the schemes.
- (iv) The cost of servicing the project cost shall be allowed in the Annual Revenue Requirement of the petitioner after the assets are capitalized and subject to prudence check of cost incurred.

Ordered accordingly.

**(Subhash Kumar)**  
**Chairman**