

Before
UTTARAKHAND ELECTRICITY REGULATORY COMMISSION
Petition No. 7 of 2022

In the Matter of:

Petition for Approval of consolidated DPR amounting to Rs. 843.724 Crore funded through ADB, assuming 90% grant in loan component for transmission projects under UTSDIP Scheme.

And

In the Matter of:

Power Transmission Corporation of Uttarakhand Limited (PTCUL)

Coram

Shri D.P. Gairola Member (Law)/Chairman(I/c)
Shri M.K.Jain Member (Technical)

Date of Order: April 26, 2022

ORDER

This Order relates to the Application filed by Power Transmission Corporation of Uttarakhand Ltd. (hereinafter referred to as "PTCUL" or "the Petitioner") vide letter No. 22 dated 13.01.2022, seeking approval of the Commission for the proposed investments under Uttarakhand Transmission Strengthening and Distribution Improvement Programme (UTSDIP) involving various works of System Improvement under Para 11 of Transmission Licence [Licence No. 1 of 2003].

The Petitioner has submitted consolidated DPR for 10 Transmission projects with a consolidated cost of Rs. 843.724 Crore. The 05 projects as shown in Table 1 below are new for which the Petitioner is seeking investment approval:

Table 1: Investment Approval sought for new 05 Nos Transmission Projects

S. No.	Particulars	Substation/Transformer Capacity	Length of lines (Km.)	Project Cost including IDC as per DPR (in Crore)
(a)	AIS Substation Landhora and Construction of LILO of 400 kV Kashipur-Puhana Line at 400 kV Sub-Station Landhora and Construction of LILO of 220 kV Manglore-Nara line at proposed 400/220/132 kV Substation Landhora.	400/220 kV (2x315MVA)	28KM	235.49
(b)	AIS substation Manglore and Construction of LILO of 220 kV Roorkee-Nara line at proposed 220kV Substation Manglore and Construction of LILO of 132 kV Manglore-Asahi line & Manglore-Air Liquid line at 220 kV S/s Manglore.	220/132/33 kV (2x160MVA, 220/132kV & 2x40 MVA, 132x33kV)	2 KM	131.41
(c)	GIS Substation, Dhaulakhera and Construction of LILO of 132 kV Kathgodam-Rudrapur Line at 132 kV Sub-Station Dhaulakhera (Haldwani).	132/33 kV (2x40MVA)	0.6 KM	62.74
(d)	GIS Substation, Khatima-II and Construction of LILO of 132 kV Khatima-Sitarganj Transmission Line at proposed 132/33 kV Substation Khatima-II.	132/33 kV (2x40MVA)	2.0 KM	68.71
(e)	AIS Substation, Sarvarkhera, US Nagar and Construction of LILO of 132 kV Kashipur-Mahuakheraganj Line at 132 kV Sub-Station Sarverkhera.	132 kV (2x40MVA)	8.7 KM	80.85
	Total			579.22

The 04 projects as shown in the table 2 below are old for which the Commission has already accorded the investment approval and the Petitioner has submitted the revised DPR for these projects:

Table 2: Revised DPR for 04 Nos already approved Transmission Projects by the Commission

No. S. No.	Particulars	Substation/Transformer Capacity	Length of lines (Km.)	Project Cost including IDC as per DPR (in Crore)
(a)	GIS Substation Selaqui, Dehradun and Construction of LILO of 220 kV Khodri-Jhajra Line at proposed 220 kV Substation Selaqui Dehradun with Underground Cable.	220/33kV (2x50MVA)	0.7 KM	83.68
(b)	GIS Substation Lohaghat	132kV/33kV (2x20MVA)		60.31
(c)	GIS Substation at Araghar and Construction of LILO of 132 kV Majra-Laltappar Line at proposed 132 kV Sub-Station Araghar Dehradun through 132 kV underground Cable.	132 kV (2x40MVA)	3.6 KM	95.81
(d)	Construction of 132 kV D/C transmission line from 220 kV S/s Mahuakheraganj to 132 kV S/s Jaspur.	-	23.32 KM	18.62
	Total			258.42

The Petitioner has submitted 01 project as shown in Table 3 below, for information to the Commission, the cost of which is below 10 Crore:

Table 3: DPR of 01 No. Transmission project for the intimation to Commission

No.	Particulars	Substation/Transformer Capacity	Length of lines (Km.)	Project Cost including IDC as per DPR (in Crore)
(a)	Stringing of second circuit of 132 kV D/C Transmission line of Panther conductor from Pithoragarh (PGCIL)-Champawat (Lohaghat).	-	39.33 KM	6.085
	Total			6.085

- The Petitioner has submitted copy of extract of 78th BoD Meeting of PTCUL held on 29.12.2021, wherein the Petitioner's Board has approved the Corporation's aforesaid proposals with a debt equity ratio of 80:20 with equity portion funding from GoU. Further, Petitioner vide its Petition propose the funding provision for these project as 72:8:20 ratio of Grant:Debt:Equity. The equity portion for the fund

shall be made available to PTCUL through the budget provision of Government of Uttarakhand.

3. With regard to 05 new projects, the Petitioner has submitted justification for each as given below:

a. **Construction of 400/220 kV (2x315 MVA) AIS S/s Landhora and Construction of LILO of 400 kV Kashipur-Puhana Line at 400kV S/s Landhora and Construction of LILO of 220 kV Manglore-Nara line at proposed 400/220/132 kV Substation Landhora.**

Presently 220 kV Roorkee S/s is getting power mainly from 220 kV Roorkee-Puhana line. Further, 220 kV Roorkee is feeding 03 No. existing 132 kV S/s at Manglore, Laksar, Bhagwanpur in radial mode. There is constraint of power flow from 220 kV Roorkee-Nara (UP) line. Transmission system strengthening of Roorkee is required for increasing the reliability of power supply, meeting N-1 contingency criteria at 220 kV level and meeting the future load growth. Roorkee and nearby area has high industrial load demand. The construction of 400/220 kV (2x315 MVA) AIS Substation Landhora shall provide N-1 contingency to 220 kV S/s Roorkee which is highly loaded. In future new 220 kV S/s can also be connected to the said 400 kV S/s at Landhora considering next 10 years load demand of Roorkee and Haridwar area.

b. **Construction of 220/132/33 kV (2x160 MVA, 220/132 kV and 2x40 MVA, 132/32 kV) AIS S/s Manglore and Construction of LILO of 220 kV Roorkee-Nara line at proposed 220kV Substation Manglore and Construction of LILO of 132 kV Manglore-Asahi line & Manglore-Air Liquid line at 220 kV S/s Manglore.**

Presently 132 kV S/s Manglore is getting power supply from 220 kV S/s Roorkee through S/C 132 kV line in radial mode which is not meeting N-1 contingency. The proposed S/s shall provide N-1 contingency to the existing 132/33 kV S/s Manglore. In future the proposed S/s shall be connected to the upcoming 400/20 kV S/s Landhora which shall strengthen the transmission system of Manglore and nearby area.

c. **Construction of 132/33 kV (2x40 MVA) GIS Substation, Dhaulakhera and Construction of LILO of 132 kV Kathgodam-Rudrapur Line at 132 kV Sub-Station Dhaulakhera (Haldwani).**

Presently Dhaulakhera area is getting power supply from existing 132 kV S/s Kathgodam and Haldwani. To meet future load demand of UPCL and to increase the reliability of power supply to Dhaulakhera and nearby area the 132/33 kV GIS S/s Dhaulakhera with the proposed capacity of 2x40 MVA with the LILO of 132 kV Kathgodam-Rudrapur line (0.6 km) is being proposed.

d. GIS Substation, Khatima-II and Construction of LILO of 132 kV Khatima-Sitarganj Transmission Line at proposed 132/33 kV Substation Khatima-II.

Presently Khatima area is getting power supply from existing 132/33 kV S/s Khatima situated in the switchyard of Khatima HEP. Due to space constraint in the switchyard of Khatima HEP, increasing capacity of the existing 132/33 kV S/s is not possible to meet the future load demand of Khatima and nearby area. Due to long 33 kV feeders, reliability of power supply in Khatima and nearby area is also affected. In view of this, a new 132/33 kV, (2x40 MVA) Khatima-II AIS Substation at Khatima is being proposed.

e. Construction of 132/33 kV (2x40 MVA) AIS Substation, Sarvarkhera, US Nagar and Construction of LILO of 132 kV Kashipur-Mahuakheraganj Line at 132 kV Sub-Station Sarverkhera.

Presently Sarvarkhera area is getting power supply from existing 132/33 kV S/s Jaspur and 220/132/33 kV S/s Mahuakheraganj. Due to severe RoW issues UPCL is experiencing difficulties in constructing new 33 kV feeders from 220/132/33 kV S/s Mahuakheraganj for the upcoming industrial load in the area. In view of this, a new 132 kV, (2x40 MVA) AIS Substation, Sarvarkhera, US Nagar is being proposed.

4. The current Petition of the Petitioner also includes revised cost for works pertaining to construction of 132 kV and 220 kV line with S/s works at various locations in the State for which the investment approvals have already been accorded earlier by the Commission. The detail of these approvals have been presented in the table below:

Table 4: Details of already approved projects by the Commission

S. No.	Particulars	Substation/Transformer Capacity	Date of approval by the Commission	Cost Earlier Approved by the Commission	Revised cost submitted in instant Petition
1	GIS Substation Selaqui, Dehradun and Construction of LILO of 220 kV Khodri-Jhajra Line at proposed 220 kV Substation Selaqui Dehradun with Underground Cable.	220/33kV (2x50MVA)	12.03.2019	119.00	83.68
2	GIS Substation Lohaghat	132kV/33kV (2x20MVA)	30.01.2015	67.41	60.31
3	GIS Substation at Araghar and Construction of LILO of 132 kV Majra-Laltappar Line at proposed 132 kV Sub-Station Araghar Dehradun through 132 kV underground Cable.	132 kV (2x40MVA)	01.03.2017	87.43	95.81
4	Construction of 132 kV D/C transmission line from 220 kV S/s Mahuakheraganj to 132 kV S/s Jaspur.	-	07.02.2017	19.95	18.62

5. As mentioned in the Table 3 above, the Petitioner vide its petition also submitted the DPR of 01 no. transmission project whose cost is below Rs. 10 Crore for kind intimation and consideration of the Commission.

Commission's observations, Views and Decision

6. On examination of the proposals submitted by the Petitioner, certain deficiencies/shortcomings were observed, which were communicated to the Petitioner vide Commission's letter's No. 1158 dated 01.02.2022. Reply to these deficiencies/shortcomings was submitted by the Petitioner vide its letter No.118 dated 10.02.2022.
7. With regard to the Commission's query on the funding pattern of projects under UTSDIP, the Petitioner vide its letter dated 10.02.2022 submitted that funding pattern for these ADB assisted projects shall be in the ratio of 80:20 (80% loan and 20% equity (counterpart funding)). However, Petitioner submitted that the terms of the funding will be finalised at the stage of loan negotiations which are under

process. The Petitioner informed that in the previous ADB loan for Himalayan States, there were provisions for 90% of the 80% ADB loan to be repaid by the Government of India. Further, the terms on which the Government of Uttarakhand will pass on the grant (90% of 80% Loan i.e. 72%) to PTCUL will be decided by the Government of Uttarakhand.

In context of above, Petitioner submitted that MD, PTCUL vide its letter dated 04.01.2022 has requested the Government of Uttarakhand to pass on the ADB assistance to PTCUL on the same terms and conditions as shall be passed on by Government of India to GoU.

The Commission has noted the submission of the Petitioner that after the execution of the said UTSDIP Scheme the overall benefits/advantages shall be as below:

- i. Improved Voltage profile in and around the area.
 - ii. Improved stability & reliability of the grid alongwith reduced unplanned outage duration (improved SAIDI index) and reduced frequency of outages (improved SAIFI index).
 - iii. Enhanced power handling capability of the system leading to industrial growth in the state.
 - iv. Transmission strengthening would help PTCUL in meeting N-1 contingency criteria.
 - v. Transmission system strengthening would help to provide reliable supply (at 33 kV) to UPCL.
8. In the light of submission of revised DPRs as mentioned in Table 4 of this Order, it is observed that since there has not been any major change in the scope of the works fresh approval for these works is not warranted. However, due to delay in implementation of these projects there is revision in Project Cost. The Commission has taken into consideration the revised cost as submitted by the Petitioner. The Commission would like to direct the Petitioner that it should go ahead with the aforesaid works without any further delay.

9. On examination of the projects, it has also been observed that while preparing the estimate in the DPRs, the Petitioner in addition to contingency and project overhead has added price contingency @ 6.8% in the estimates. In the absence of any justified reasons for including price contingency, the Commission is not considering the same as of now.
10. Based on the above, against the Petitioner's proposed capital expenditure for 09 Nos. projects amounting to Rs. 837.62 Crore, the Commission hereby grants in-principle approval for the expenditure of Rs. 730.75 Crore only as per Table 5 given below with the direction that the Petitioner should go ahead with the aforesaid works subject to fulfilment of the terms & conditions mentioned in Para 11 below.

Table 5: Project wise cost proposed by the Petitioner vis-a-vis cost considered by the Commission

S. No.	Particulars	Substation/ Transformer Capacity	Length of lines (Km.)	Project Cost including IDC as per DPR (in Crore)	Cost considered by the Commission including IDC (in Crore)
(a)	AIS Substation Landhora and Construction of LILO of 400 kV Kashipur-Puhana Line at 400kV Sub-Station Landhora and Construction of LILO of 220 kV Manglore-Nara line at proposed 400/220/132 kV Substation Landhora.	400/220 kV (2x315MVA)	28KM	235.49	204.54
(b)	AIS substation Manglore and Construction of LILO of 220 kV Roorkee-Nara line at proposed 220kV Substation Manglore and Construction of LILO of 132 kV Manglore-Asahi line & Manglore-Air Liquid line at 220 kV S/s Manglore.	220/132/33 kV (2x160MVA, 220/132kV & 2x40 MVA, 132x33kV)	2 KM	131.41	116.05
(c)	GIS Substation, Dhaulakhera and Construction of LILO of 132 kV Kathgodam-Rudrapur Line at 132 kV Sub-Station Dhaulakhera (Haldwani).	132/33 kV (2x40MVA)	0.6 KM	62.74	55.61
(d)	GIS Substation, Khatima-II and Construction of LILO of 132 kV Khatima-Sitarganj Transmission Line at proposed 132/33 kV Substation Khatima-II.	132/33 kV (2x40MVA)	2.0 KM	68.71	61.26
(e)	AIS Substation, Sarvarkhera, US Nagar and Construction of LILO of 132 kV Kashipur-	132 kV (2x40MVA)	8.7 KM	80.85	69.05

Table 5: Project wise cost proposed by the Petitioner vis-a-vis cost considered by the Commission

S. No.	Particulars	Substation/ Transformer Capacity	Length of lines (Km.)	Project Cost including IDC as per DPR (in Crore)	Cost considered by the Commission including IDC (in Crore)
	Mahuakheraganj Line at 132 kV Sub-Station Sarverkhera.				
(f)	GIS Substation Selaqui, Dehradun and Construction of LILO of 220 kV Khodri-Jhajra Line at proposed 220 kV Substation Selaqui Dehradun with Underground Cable.	220/33kV (2x50MVA)	0.7	83.68	72.09
(g)	GIS Substation Lohaghat	132kV/33kV (2x20MVA)		60.31	52.11
(h)	GIS Substation at Araghar and Construction of LILO of 132 kV Majra-Laltappar Line at proposed 132 kV Sub-Station Araghar Dehradun through 132 kV underground Cable.	132 kV (2x40MVA)	3.6	95.81	84.43
(i)	Construction of 132 kV D/C transmission line from 220 kV S/s Mahuakheraganj to 132 kV S/s Jaspur.	-	23.32	18.62	15.61
	Total			837.62	730.75

11. Terms and Conditions subject to which in-principle approval granted by the Commission are as follows:

- (i) The Petitioner should go for the competitive bidding for obtaining most economical prices from the bidders.
- (ii) All the loan conditions as may be laid down by the funding agency in their detailed sanction letter are strictly complied with.
- (iii) 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 funding agreed by the State Government or any other source in respect of the proposed projects.
- (iv) After completion of the aforesaid projects, the Petitioner shall submit the completed cost and financing of the projects.

- (v) 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.

(M.K. Jain)
Member (Technical)

(D.P. Gairola)
Member (Law)/Chairman I/C