

Before
UTTARAKHAND ELECTRICITY REGULATORY COMMISSION
Petition No. 39 of 2025

In the Matter of:

Application seeking approval for the investment on the following projects:

- (1) Construction of 33/11 kV Substation alongwith its associated 33 kV line at Kathgodam, Haldwani, District-Nainital.
- (2) Construction of 33/11 kV Substation alongwith its associated 33 kV line at Govt. ITI, Dahariya, Haldwani, District-Nainital.
- (3) Construction of 33/11 kV Substation alongwith its associated 33 kV line at Jaipur, Padli, Haldwani, District-Nainital.

And

In the Matter of:

Uttarakhand Power Corporation Ltd.,
Victoria Cross Vijeta Gabar Singh Urja Bhawan,
Kanwali Road, Dehradun.

...Petitioner

Coram

Shri M. L. Prasad	Chairman
Shri Anurag Sharma	Member (Law)

Date of Order: April 30, 2025

ORDER

This Order relates to the proposals pertaining to (1) Construction of 33/11 kV Substation alongwith its associated 33 kV line at Kathgodam, Haldwani, District-Nainital, (2) Construction of 33/11 kV Substation alongwith its associated 33 kV line at Govt. ITI, Dahariya, Haldwani, District-Nainital and (3) Construction of 33/11 kV Substation alongwith its associated 33 kV line at Jaipur, Padli, Haldwani, District-Nainital filed by Uttarakhand Power Corporation Limited (hereinafter referred to as "UPCL" or "the Petitioner" or "the licensee") seeking approval of the Commission. The above proposals have been filed before the Commission on dated 03.02.2025 alongwith

the proposal pertaining to Construction of 33/11 kV Substation at Shri Kedarnath Dham at District-Rudraprayag, Order on which has already been issued on dated 24.03.2025.

Background

2. The Petitioner vide its letter No. 236/D(P)/UPCL/UERC (C-4) dated 03.02.2025 submitted its Petition for investment approval of four projects under the provisions of the Clause 11 of Distribution and Retail Supply Licence and Clause 40 of UERC (Conduct of Business) Regulations, 2014 read with relevant provision of the Electricity Act, 2003, and the Rules and Regulations made thereunder.
3. Since, the Order on the proposal of the Petitioner pertaining to Shri Kedarnathji Dham has already been issued, therefore, facts of the case related other 03 nos. proposals are mentioned hereunder:
4. The Petitioner in its Petition under the facts of the case with regard to the construction of 03 nos. 33/11 kV Substations (excluding 33/11 kV Substation proposed at Shri Kedarnathji Dham) i.e. (1) Construction of 33/11 kV Substation alongwith its associated 33 kV line at Kathgodam, Haldwani, District-Nainital, (2) Construction of 33/11 kV Substation alongwith its associated 33 kV line at Govt. ITI, Dahariya, Haldwani, District-Nainital and (3) Construction of 33/11 kV Substation alongwith its associated 33 kV line at Jaipur, Padli, Haldwani, District-Nainital has submitted that:

“

- (1) *With a view to ensure reliable power supply, improved voltage profile and to meet future load growth, the applicant company has proposed the construction of ...*

the land for 33/11 kV S/s at Kathgodham and GITI, Dahariya are under possession of UPCL and the land for 33/11 kV S/s at Jaipur, Padli is under acquisition by the respective Electricity Distribution Division of UPCL. The project is proposed to be implemented partially on turnkey basis.

- (2) *The duration of the project is as follows:*

S. No.	Name of Work	Scheduled Date of Completion
1	...	
2	Construction of 33/11 kV S/s at Kathgodham, Haldwani and its associated 33 kV line.	12 months from date of award

S. No.	Name of Work	Scheduled Date of Completion
3	Construction of 33/11 kV S/s at Govt. ITI, Dahariya, Haldwani and its associated 33 kV line.	12 months from date of award
4	Construction of 33/11 kV S/s at Jaipur, Padli, Haldwani and its associated 33 kV line.	12 months from date of award

(3) The details of substations and lines are as follows:-

S. N.	Name of the Project	District	Fund Resources	BoD Approval	Capacity	Length of 33 kV Line (Km.)	Total Cost (Rs. in Lakh)
1	...						
2	Construction of 33/11 kV S/s at Kathgodham, Haldwani and its associated 33 kV line.	Nainital	70% Loan from financial institutions & 30% State Equity	121 st 26.12.24	2x12.5	0.40	1712.62
3	Construction of 33/11 kV S/s at Govt. ITI, Dahariya, Haldwani and its associated 33 kV line.				2x12.5	9.10	2821.38
4	Construction of 33/11 kV S/s at Jaipur, Padli, Haldwani and its associated 33 kV line.				2x12.5	13.00	3258.69
	...						7792.69

(4) The detailed project report showing examination of an economic technical system together with the outline of the work to be undertaken, the salient features and particulars demonstrating the need for investment alongwith relevant cost benefit analysis is enclosed herewith at Annexure-A. The work to be undertaken does not have any adverse environmental effect.

(5) The approval from BoD is enclosed herewith at Annexure-B for your kind perusal.

(6) The proposed investment for 33/11 kV Substations is as follows:

S. No.	Name of Work	Proposed Investment
1	...	
2	Construction of 33/11 kV S/s at Kathgodham, Haldwani and its associated 33 kV line.	Loan (70%) from M/s REC and Equity (30%) from

S. No.	Name of Work	Proposed Investment
3	Construction of 33/11 kV S/s at Govt. ITI, Dahariya, Haldwani and its associated 33 kV line.	State Government (Annexure-C)
4	Construction of 33/11 kV S/s at Jaipur, Padli, Haldwani and its associated 33 kV line.	

5. The Petitioner alongwith its Petition has enclosed certified true copy of 121st Board of Directors meeting dated 26.12.2024. The resolution passed by BoD states that:-

“ITEM NO. 121.08: Construction of 01 no. new 33/11 kV Substation along with its associated 33 kV at Kathgodham, Haldwani including 05 years AMC of the substation.

“RESOLVED THAT approval of the Board be and is hereby accorded for Construction of 01 no. new 33/11 kV Substation with 2x12.5 MVA capacity along with its approx. 0.40 km. associated UG 33 kV line with an estimated cost of approximately Rs. 1712.62 Lakh at Kathgodham, Haldwani in District-Nainital with a variation of +10% in the total estimated cost.’

Sl. No.	Name of 33/11 kV Sub-station	Capacity (MVA)	Length (km.)	Estimated Cost(Rs. in Lakh)
1	Kathgodham Haldwani	2x12.5	-	1635.82
2	Associated new 33 kV line from 132/33 kv S/s Kathgodham	-	0.40	
3	Land development and SGR building	-		76.80
TOTAL		25	0.40	1712.62

‘RESOLVED FURTHER THAT 70% of the amount shall be met by arranging debt from the Financial Institution, M/S REC Ltd.’

‘RESOLVED FURTHER THAT 30% of the amount shall be met either by state Government or from UPCL through its own funds.’

...

ITEM NO. 121.09: Construction of 01 no. new 33/11 kV Substation along with its associated 33 kV line at Govt. ITI, Dahariya, Haldwani including 05 years AMC of the substation.

“RESOLVED THAT approval of the Board be and is hereby accorded for Construction of 01 no. new 33/11 kV Substation with 2x12.5 MVA capacity along with its approx. 9.10

km. (6.60 km. Overhead and 2.50 km. Underground) associated 33 kV line with an estimated cost of approximately Rs. 2821.38 Lakh at Govt. ITI, Dahariya, Haldwani in District-Nainital with a variation of +25% in the total estimated cost.'

Sl. No.	Name of 33/11 kV Sub-station	Capacity (MVA)	Length (km.)	Estimated Cost (Rs. in Lakh)
1	Govt. ITI Daharia Haldwani	2x12.5	-	2738.26
2	Associated new 33 kV line from 132/33 kV S/s Kamaluwaganja	-	9.10	
3	Civil Works	-	-	83.12
	TOTAL	25	9.10	2821.38

'RESOLVED FURTHER THAT 70% of the amount shall be met by arranging debt from the Financial Institution, M/s REC Ltd.'

'RESOLVED FURTHER THAT 30% of the amount shall be met either by State Government or from UPCL through its own funds.'

...

ITEM NO. 121.10: Construction of 01 no. new 33/11 kV Substation along with its associated 33 kV line at Jaipur, Padli, Haldwani including 05 years AMC of the substation.

"RESOLVED THAT approval of the Board be and is hereby accorded for Construction of 01 no. new 33/11 kV Substation with 2x12.5 MVA capacity along with its approx. 13.00 km. kV line (11 km. overhead and 2.00 km. UG) with an estimated cost of approximately Rs. 3258.69 Lakh at Jaipur, Padli, Haldwani in District-Nainital with a variation of +25% in the total estimated cost.'

Sl. No.	Name of 33/11 kV Sub-station	Capacity (MVA)	Length (km.)	Estimated Cost (Rs. in Lakh)
1	Jaipur Padli Haldwani	2x12.5	-	3133.33
2	Associated new 33 kV line from 132/33 kV S/s Kamaluwaganja	-	13.00	
3	Civil Works	-	-	125.36
	TOTAL	25	13.00	3258.69

'RESOLVED FURTHER THAT 70% of the amount shall be met by arranging debt from the Financial Institution, M/S REC Ltd.'

'RESOLVED FURTHER THAT 30% of the amount shall be met either by State Government or from UPCL through its own funds.'

..."

6. The Petitioner in its Petition under the Relief Sought has requested the Commission to grant approval to process the tender of 33/11 kV Substations at Kathgodam (Haldwani), Govt. ITI, Dahariya (Haldwani), and Jaipur, Padli (Haldwani) as the land of existing Substation Old Kathgodam, owned by PTCUL is required to be evacuated at the earliest and also in view of heat wave observed last year. Further, the Petitioner submitted that these substations are required to be constructed at the earliest for providing better power supply during the peak summers and to comply assurance given by Hon'ble Chief Minister to the local public during his visit of the area. Furthermore, Petitioner requested the Commission to grant approval for the construction of aforesaid 33/11 kV Substations & their associated lines.
7. The Petitioner with regard to its proposal for 33/11 kV Substation at Kathgodam, Haldwani has furnished the justification for the aforesaid substation that:-

"

At present, 33/11 kV Old Substation Kathgodham is overloaded and surrounding region of Haldwani is experiencing rapid industrialization. Therefore, in order to minimize the load of overloaded 33/11 kV Substation Old Kathgodham and cater to the increase in demand owing to industrialization in nearby area, the construction of new 33/11 kV Substation Kathgodham, Haldwani along with its associated 33 kV line has been proposed. This new substation will also cater to the future load growth and ensure 24x7 quality power supply to the consumers. Approx. 619 amp. load (11 kV) will be shifted to the proposed substation from 04 no. 11 kV feeders namely Mukhani, Town-2, Town-3 and Hydel Colony emanating from 33/11 kV Substation Old Kathgodham, Haldwani. As these existing 11 kV feeders are overloaded, the problem of low voltage (about 8.5 kV-9.5 kV) is common in the connected region. As a result of this approximately 5000 consumers are affected due to inadequate power supply. After commissioning of this substation, quantity and quality of supply shall improve sufficiently and revenue shall be realized from the consumers connected to this substation including revenue from addition of new consumers in future."

8. The Petitioner with regard to its proposal for 33/11 kV Substation at Jaipur, Padli, Haldwani along with its associated 33 kV line has furnished the justification for the aforesaid substation that:-

“At present, 33/11 kV Substation Kamaluaganja and Kathgariya is overloaded and surrounding region of Haldwani is experiencing rapid industrialization. Therefore, in order to minimize the load of overloaded Kamaluaganja and Kathgariya substation and cater to the increase in demand owing to industrialization in nearby area, the construction of a new 33/11 kV Substation Jaipur, Padli, Haldwani along with its associated 33 kV line has been proposed. This new substation will also cater to the future load growth and ensure 24x7 quality power supply to the consumers. Approx. 305 amp. load (11 kV) will be shifted to the proposed substation from 03 no. 11 kV feeders namely Lamchaur, Basani and Fatehpur emanating from 33/11 kV Substation Kamaluaganja and Kathghariya. As these existing 11 kV feeders are overloaded, the problem of low voltage (about 8.5 kV-9.5 kV) is common in the connected region. As a result of this, approximately 5000 consumers are affected due to inadequate power supply. After commissioning of this substation, quantity and quality of supply shall improve sufficiently and revenue shall be realized from the consumers connected to this substation including revenue from addition of new consumers in future.”

9. The Petitioner with regard to its proposal for 33/11 kV Substation at GITI, Dahariya, Haldwani along with its associated 33 kV line has furnished the justification for the aforesaid substation that:-

“At present, 33/11 kV Substation Kamaluaganja, Transport Nagar and Kathgariya is overloaded and surrounding region of Haldwani is experiencing rapid industrialization. Therefore, in order to minimize the load of overloaded Kamaluaganja, Transport Nagar and Kathgariya substation and cater to the increase in demand owing to industrialization in nearby area, the construction of a new 33/11 kV Substation Govt. ITI, Dahariya, Haldwani along with its associated 33 kV line has been proposed. This new substation will also cater to the future load growth and ensure 24x7 quality power supply to the consumers. Approx. 390 amp. load (11 kV) will be shifted to the proposed substation from 05 no. 11 kV feeders namely Farm No. 03, Dahariya, Kushumkheda, Mukhani and Pilikhoti emanating from 33/11 kV Substation Transport Nagar, Kamaluaganja and Kathghariya. As these existing 11 kV feeders are overloaded, the problem of low voltage

(about 8.5 kV-9.5 kV) is common in the connected region. As a result of this, approximately 8,000 consumers are affected due to inadequate power supply. After commissioning of this substation, quantity and quality of supply shall improve sufficiently and revenue shall be realized from the consumers connected to this substation including revenue from addition of new consumers in future."

10. On examination of the proposal made in the Petition & Detailed Project Report (DPR), certain deficiencies/infirmities were identified and accordingly, the Commission vide its letter No. 106 dated 21.04.2025 directed the Petitioner to submit/furnish its reply on the following latest by 14.05.2025: -

"

(A) General Points

1. *UPCL is required to furnish details of land acquisition alongwith supporting documents in support of the proposed Substations at Kathgodam, Jaipur-Padli & Govt. ITI Dahariya.*
2. *UPCL is required to confirm regarding the requirement of forest, railway, PWD etc. clearances, if any, for the proposed Substations.*
3. *UPCL is required to submit the network line chart superimposed on GIS map of all 220/132/33 kV S/s & 132/33 kV S/s of PTCUL that are catering the loads of Haldwani region alongwith the details of load on each 33 kV feeder with conductor types and length (in Kms.) that are emanating from the PTCUL's Substations. Further, UPCL is required to depict its all 33/11 kV S/s on the aforesaid GIS map alongwith its load. The same has to be submitted on the A3 sheet in 3 copies.*
4. *UPCL is required to furnish detail of 33 kV bays at 220/132/33 kV S/s & 132/33 kV S/s of PTCUL that are catering the load of Haldwani region alongwith details of spare bays and availability of space for future expansion.*
5. *UPCL has considered the Centage charges@ of 15% over & above the Contingency charges @ of 3%. Further, as per BOD approval enclosed with the Petition it is observed that price variation of 10%/ 25% on the estimated cost has been approved. In this regard, UPCL is required to submit the reason for considering such charges/ price variation in its estimates/BoD approval.*

6. *UPCL has proposed the cost of 12.5 MVA, 33/11 kV Transformers from its centralized material. In this regard, UPCL is required to submit the details of the availability of 12.5 MVA transformers in its centralized material store alongwith the basis of its cost as considered in the estimates.*
7. *UPCL has proposed 12.5 MVA transformers for proposed 33/11 kV Substations at Kathgodam, Jaipur-Padli & Govt. ITI Dahariya. In this regard, UPCL is required to substantiate the reason for opting 12.5 MVA transformers only in all aforesaid proposed Substations. Further, UPCL is also required to submit Substation-wise details of 12.5 MVA transformers installed during last 5 years alongwith its cost.*
8. *UPCL is required to furnish the activity-wise schedule for the completion of the proposed 33/11 kV Substations at Kathgodam, Jaipur-Padli & Govt. ITI Dahariya in bar chart.*
9. *UPCL under the justification section of its proposal for 33/11 kV Substations at Kathgodam, Jaipur-Padli & Govt. ITI Dahariya has narrated the problem of under voltage at 11 kV networks. UPCL is required to substantiate the same with the MRI data of each outgoing 11 kV feeder for last 12 months.*
10. *UPCL is required to furnish the details of capacitor banks installed at the existing 33/11 kV substations or proposed at the existing 33/11 kV Substations.*
11. *UPCL is required to furnish the rationale for including 5 years AMC in its estimates for proposed 33/11 kV Substations at Kathgodam, Jaipur-Padli & Govt. ITI Dahariya. Further, UPCL is required to confirm regarding the details of scope of work covered under the aforesaid 5 years AMC and confirm whether routine operation & maintenance are covered under the aforesaid AMC or not.*
12. *UPCL is required to furnish soft copy of estimates in MS Excel format for the proposed works.*
13. *UPCL is required to furnish the current status of tenders for the proposed Substations at Kathgodam, Jaipur-Padli & Govt. ITI Dahariya.*
- (B) Construction of 2x12.5 MVA, 33/11 kV Substation at Kathgodam, Haldwani, Nainital alongwith its associated 33 kV line**
 1. *UPCL is required to submit the reason for proposing the new 2x12.5 MVA, 33/11 kV S/s at Kathgodam despite having existing 1x12.5 MVA, 33/11 kV S/s at*

Kathgodam. Further, UPCL is required to confirm why augmentation of existing Substation at Kathgodam has not been proposed rather new Substation has been proposed in closed proximity of the existing Substation.

2. UPCL is required to confirm whether the existing 33/11 kV S/s at Kathgodam would continue to operate post commissioning of the proposed 33/11 kV S/s. In case the old existing Substation would not be in operation, then UPCL is required to submit the details of the equipment which would be dismantled and used in the proposed 33/11 kV S/s in the following format:-

Sl. No.	List of equipment's proposed to be dismantled from the existing S/s		
	List of such equipment's	Whether the same would be used in the proposed S/s (Yes/No)	Cost considered in the estimate of proposed S/s (in Rs. Lakh)

3. UPCL is required to furnish a general arrangement drawing of existing and proposed 33/11 kV S/s at Kathgodam, depicting the overall dimension of the Substation, transformer(s) and incoming & outgoing feeders, firewall, control room, oil soak pit, auxiliary transformer.
4. UPCL is required to submit that how the requirement of 'N-1' line contingency shall be ensured for the proposed 33/11 kV Substation at Kathgodam in compliance with the Regulation 3.6(4) of UERC (Distribution Code) Regulations, 2018.
5. UPCL has proposed the load growth of 1% per annum with payback period of 17 years 11 months for the proposed Substation. As the payback period of the proposed project is high and the load growth of the area is only 1% per annum which prima-facie indicate that existing substation can cater load for another 5 years, UPCL is required to submit the rationale for proposing such Substation.

(C) Construction of 2x12.5 MVA, 33/11 kV Substation at Jaipur, Padli, Haldwani, Nainital alongwith its associated 33 kV line

1. UPCL at 'Justification' section of its DPR has submitted that the existing 33/11 kV S/s at Kamaluaganj & Kathgariya are overloaded and in order to minimize the load of aforesaid overloaded Substation, the construction of a new 33/11 kV S/s at

Jaipur, Padli has been proposed. However, from the single line chart submitted for the proposed 33/11 kV S/s, it is observed that aforesaid 33/11 kV S/s at Kamaluaganj & Kathgariya are not overloaded. In this regard, UPCL is required to submit the reason for the same.

2. *UPCL in its instant Petition has submitted that the 33 kV feeder emanating from 220/33 kV S/s Kamaluaganj to 33/11 kV S/s Kathgariya is 6.5 Km. long and is of Dog/ Panther conductor. UPCL is required to categorically submit the type of conductor between the aforesaid Substations alongwith its section-wise length.*

Further, UPCL is required to confirm how the aforesaid line would cater to the load of 2x12.5 MVA, 33/11 kV S/s Kathgariya & proposed 2x12.5 MVA, 33/11 kV S/s Jaipur, this prima-facie depict poor planning/designing while preparing the instant Petition. UPCL is required to clarify in this regard.

3. *UPCL is required to furnish data sheet of AAAC conductor proposed for 33/11 kV S/s Jaipur (Padli) and confirm why AAAC conductor has been proposed.*
4. *UPCL is required to furnish a general arrangement drawing of existing and proposed 33/11 kV S/s at Jaipur-Padli, depicting the overall dimension of the Substation, transformer(s) and incoming & outgoing feeders, firewall, control room, oil soak pit, auxiliary transformer.*
5. *UPCL is required to submit that how the requirement of 'N-1' line contingency shall be ensured for the proposed 33/11 kV Substation at Jaipur-Padli in compliance with the Regulation 3.6(4) of UERC (Distribution Code) Regulations, 2018.*
6. *UPCL has proposed the load growth of 1% per annum with payback period of 12 years 10 months for the proposed Substation. It is observed that existing substations have sufficient transformation capacity and prima-facie indicates that transformation capacity at existing substation can easily cater load for another 10-15 years considering 1% load growth. UPCL is required to submit the rationale for proposing the proposed Substation.*

(D) Construction of 2x12.5 MVA, 33/11 kV Substation at Govt. ITI, Dahariya, Haldwani, Nainital alongwith its associated 33 kV line

1. *UPCL has proposed that load of the overloaded 33/11 kV S/s Kamaluaganj, 33/11 kV S/s Kathgariya & 33/11 kV S/s Transportnagar would be shifted to the proposed*

33/11 kV S/s at Govt. ITI- Dahariya. However, the aforesaid Substations as per the submission of the UPCL in the instant Petition are not found overloaded. Further, UPCL has also proposed the 33/11 kV S/s at Jaipur, Padli, wherein, some of the loads from the aforesaid Substations 33/11 kV S/s Kamaluaganj & 33/11 kV S/s Kathgariya would also shift. In this regard, UPCL is required to submit the rationale for the same. Further, UPCL is also required to submit the single line diagram depicting the 220/33 kV S/s at Kamaluaganj, 33/11 kV S/s at Kamaluaganj, 33/11 kV S/s at Kathgariya & 33/11 kV S/s Transportnagar alongwith 33 kV and all 11 kV feeders with its load and conductor types considering the pre & post scenario i.e. construction of 33/11 kV S/s at Jaipur, Padli and 11 kV S/s Govt. ITI Dahariya.

2. UPCL is required to furnish a general arrangement drawing of existing and proposed 33/11 kV S/s at Govt. ITI, Dahariya, Haldwani depicting the overall dimension of the Substation, transformer(s) and incoming & outgoing feeders, firewall, control room, oil soak pit, auxiliary transformer.
 3. UPCL is required to submit the rationale for considering the cost of Rs. 75 Lakhs against 33 kV bay in its estimates.
 4. UPCL is required to submit that how the requirement of 'N-1' line contingency shall be ensured for the proposed 33/11 kV Substation at Govt. ITI Dahariya in compliance with the Regulation 3.6(4) of UERC (Distribution Code) Regulations, 2018.
 5. UPCL has proposed the load growth of 1% per annum with payback period of 10 years 04 months for the proposed Substation. It is observed that existing substations have sufficient transformation capacity and prima-facie indicates that transformation capacity at existing substation can easily cater load for another 10-15 years considering 1% load growth. UPCL is required to submit the rationale for proposing the proposed Substation."
11. In response to the above observations/ deficiencies, Petitioner vide its letter No. 837/Dir.(Project)/UPCL/UERC dated 28.04.2025 submitted its point-wise reply as follows:

"

(A) General Points

1.

Submission of UPCL

The land for proposed 33/11 kV Substation Kathgodam is property of UPCL. Moreover, the land for proposed 33/11 kV Substation GITI, Dahariya has been provided by Revenue Department and is in UPCL's possession. UPCL has constructed the boundry wall in the said land. Further, the District Revenue Department has sent the proposal to GoU for transfer of identified land for proposed 33/11 kV Substation Jaipur, Padli.

2.

Submission of UPCL

No clearance from forest and railway department is required for the all proposed substations however, road cutting permission from PWD will be required for the 02 projects namely Jaipur-Padli & Govt. ITI Dahariya.

3.

Submission of UPCL

The GPS coordinate of the proposed substations as well as the substations concerned to proposed substations are here under:

1. KATHGODHAM:		
• 132/33 kV S/s Kathgodham	-	29.24923, 79.53515
• 33/11 kV S/s Old Kathgodham	-	29.24923, 79.53515
• Proposed 33/11 kV S/s Kathgodham	-	29.2493214, 79.5353823
2. GITI, DAHARIYA:		
• 220/33 kV S/s Kamaluwaganja	-	29.208623, 79.458752
• 33/11 kV S/s Kathghariya	-	29.234914, 79.480115
• 33/11 kV S/s Kamaluwaganja	-	29.210523, 79.464994
• Proposed 33/11 kV S/s Govt. ITI, Dahariya	-	29.207187, 79.512696
3. JAIPUR, PADLI:		
• 220/33 kV S/s Kamaluwaganja	-	29.208623, 79.458752
• 33/11 kV S/s Kamaluwaganja	-	29.210523, 79.464994
• 33/11 kV S/s Kathghariya	-	29.234914, 79.480115
• 33/11 kV S/s Transport Nagar	-	29.192449, 79.514427
• Proposed 33/11 kV S/s Jaipur, Padli	-	29.229906, 79.436666

4.

Submission of UPCL

The details of 33 kV Bays at 220/132/33 kV S/s & 132/33 kV S/s of PTCUL that are catering the load of Haldwani region alongwith details of spare bays and availability of space for future expansion is being compiled by field units and shall be submitted separately.

5.

Submission of UPCL

The Centage charges @ of 15% over & above the Contingency charges @ of 3% has been considered in compliance to the OM No. 1582/D(O)/T-10, dated: 20.06.2018 is being enclosed as Annexure-A.

The variation of 10% to 25% on the estimated cost has been proposed and approved to cover the variation in cost at the time of bidding, variation in cost due to variation in Bill of Quantity (BoQ) during the execution due to unforeseen reasons as well as the Price Variation (PV) during the execution pf the project. However, the same will be paid on actual basis on both side.

6.

Submission of UPCL

The details of availability of 12.5 MVA transformer in UPCL's centralized material store as per SAP module as on dated: 25.04.2025 is being enclosed as Annexure-B. The cost of the material varies on day to day basis in the SAP module. The cost of 12.5 MVA transformers in the estimate of the above projects has been taken for the month of December, 2024.

7.

Submission of UPCL

To cater the transferred load from existing substations and to meet future load growth in the area UPCL has proposed 12.5 MVA power transformers. The substation-wise details of 12.5 MVA transformers installed during last 5 years alongwith their cost is being enclosed as Annexure-C.

8.

Submission of UPCL

The tender to award the work has been invited and PERT/BAR chart shall be submitted by the respective contractor. However, the general BAR chart for execution of the work is being enclosed as Annexure-D.

9.

Submission of UPCL

The MRI data of each outgoing 11 kV feeder for last 12 months is being compiled by field units and shall be submitted separately.

10.

Submission of UPCL

*The list of capacitor banks installed at the existing 33/11 kV Substations and capacitor bank which are being installed at existing 33/11 kV Substations **is being enclosed as Annexure-E.***

11.

Submission of UPCL

To ensure proper functioning and efficiency, to extend the life span of the substation and avoid unnecessary disruptions and annual maintenance contract for five years is done for uninterrupted reliable power supply to consumers. The details of scope of work covered under the AMC for all the 03 no. projects is reproduced herewith:

It will include O&M and AMC of the whole project for 5 years after completion of defect liability period of two years. The scope will include operation and maintenance of 33/11 kV Substation developed by the contractor against the tender. It also includes repair of any equipment/part if required. Material for repairing shall be provided by the contractor without any extra cost. The contractor shall be required to get the equipment checked and tested in guidance of the Executive Engineer concerned and get the defective part & equipment ok by repairing/replacing the defective one.

The scope also includes insurance during transit, storage, repair/replacement of the defective equipment/part and commissioning of the repaired equipment.

The contractor shall be responsible for completeness and working of the whole system created by them. Civil works if required shall be carried out by the contractor.

Contractor will provide the fortnightly report (15th and 30th of every month, next working day in case of holiday) of satisfactory working of the project to the concerned Executive Engineer in the format approved by them.

12.

Submission of UPCL

The soft copy of estimates for all the project in MS Excel has been sent on email on dated: 28-04-2025.

13.

Submission of UPCL

The tender for construction of the substations and their associated lines floated on 19.12.2024 and 16.02.2025 respectively is under process and shall be finalized after receiving the investment approval from Hon'ble Commission.

(B) General Construction of 2x12.5 MVA, 33/11 kV S/s at Kathgodam, Haldwani, District-Nainital alongwith its associated 33 kV line

1.

Submission of UPCL

The 1x12.5 MVA Old Substation, Kathgodham is situated in the permises of 132/33 kV S/s Haldwani owned by PTCUL. The power transformer is installed between 02 no., 40 MVA power transformers of PTCUL. Moreover there is not enough space for extension hence PTCUL is requesting to evacuate the land. Since, the land of existing Substation is required to be evacuated at the earliest, therefore new substation in place of augmentation of old one has been proposed.

2.

Submission of UPCL

As per estimate for the project 01 no. 12.5 MVA power transformer is to be issued by UPCL from store. However, 01 no. 12.5 MVA power transformer is to be used from existing substation. However, the other equipments/material dismantled from the existing substation shall be received back from site. List of dismantled equipment's from the existing substation could be provided after execution of the work.

3.

Submission of UPCL

The general arrangement drawing of existing and proposed 33/11 kV S/s at Kathgodam is being enclosed as Annexure-F.

4.

Submission of UPCL

To ensure “N-1” contingency for the proposed 33/11 kV Substation at Kathgodam, construction of double circuit 33 kV underground line from 132/33 kV Substation Kathgodam has been proposed.

5.

Submission of UPCL

The 1x12.5 MVA Old Substation, Kathgodham is situated in the permises of 132/33 kV Substation Haldwani owned by PTCUL. The land of existing Substation is required to be evacuated at the earliest. Therefore, new substation in place of augmentation of old one has been proposed.

(C) Construction of 2x12.5 MVA, 33/11 kV Substation at Jaipur, Padli, Haldwani, District-Nainital alongwith its associated 33 kV line:

1.

Submission of UPCL

The existing substations Kamaluwaganja & Kathgariya are situtated a rapidly growing area. Therefore, the proposed 33/11 kV Substation at Jaipur, Padli is required to share the load of these substations and to cater the upcoming load in and around Jaipur, Padli.

2.

Submission of UPCL

The 33 kV feeder emanating from 220/33 kV S/s Kamaluwaganj to 33/11 kV S/s Kathgariya is 6.5 Km. long and is of Dog conductor. However, upgradation of above said line is Dog to Panther conductor is under process. The revised single line diagram is being enclosed as Annexure-G.

3.

Submission of UPCL

The 33 kV line proposed for 33/11 kV S/s Jaipur (Padli) is passing through dense populated area, the route already have 11 kV LT lines. Therefore in view of safety and to ensure continuous power supply AAAC conductor. The data sheet of AAAC conductor proposed for 33/11 kV S/s Jaipur (Padli) is being enclosed as Annexure-H.

4.

Submission of UPCL

The general arrangement drawing is being enclosed as Annexure-I.

5.

Submission of UPCL

To ensure "N-1" contingency of the proposed 33/11 kV S/s at Jaipur, Padli, construction of single circuit 08 Km., 33 kV line from 220/33 kV Substation Kamaluwaganja and single circuit 5 Km., 33 kV line from 33/11 kV Substation Kathghariya has been proposed.

6.

Submission of UPCL

The existing substations Kamaluwaganja & Kathgariya are situated a rapidly growing area. Therefore, the proposed 33/11 kV Substation at Jaipur, Padli is required to share the load of these substations and to cater the upcoming load in and around Jaipur, Padli.

(D) Construction of 2x12.5 MVA, 33/11 kV Substation at Govt. ITI, Dahariya, Haldwani, District-Nainital alongwith its associated 33 kV line:

1.

Submission of UPCL

The existing substations Kamaluwaganja, Kathgariya and Transport Nagar are situated a rapidly growing area. Therefore, the proposed 33/11 kV Substation at Govt. ITI, Dahariya is required to share the load of these substations and to cater the upcoming load in and around Govt. ITI, Dahariya.

2.

Submission of UPCL

The general arrangement drawing is being enclosed as Annexure-J.

3.

Submission of UPCL

The cost of 33 kV Bay at 220/33 kV Substation, Kamaluwaganja has been taken on the basis of previous estimated cost as informed by PTCUL. However, the same shall be deposited on actual basis as per PTCUL requirement.

4.

Submission of UPCL

To ensure "N-1" contingency of proposed 33/11 kV S/s at Govt. ITI, Dahariya, construction of single circuit 8.5 Km., 33 kV line from 220/33 kV S/s Kamaluwaganja and single circuit 0.6 Km., 33 kV line from 33 kV Bay at Dr. Sushila Tiwari Hospital has been proposed.

5.

Submission of UPCL

The existing substations Kamaluwaganja, Kathgariya and Transport Nagar are situated a rapidly growing area. Therefore, the proposed 33/11 kV Substation at Govt. ITI, Dahariya is required to share the load of these substations and to cater the upcoming load in and around Govt. ITI, Dahariya.

In view of above, the desired information is enclosed for your kind information and necessary action.

12. UPCL vide its letter no. 839/Dir.(Project)/UPCL/UERC dated 29.04.2025 submitted its reply on the balance deficiencies alongwith certain corrections in its earlier submission as mentioned hereunder:-

“

(A) General Points:

3. UPCL is required to submit the network line chart superimposed on GIS map of all 220/132/33 kV S/s & 132/33 kV S/s of PTCUL that are catering the loads of Haldwani region alongwith the details of load on each 33 kV feeder with conductor types and length (in Kms.) that are emanating from the PTCUL's Substations. Further, UPCL is required to depict its all 33/11 kV S/s on the aforesaid GIS map alongwith its load. The same has to be submitted on the A3 sheet in 3 copies.

Submission of UPCL:

The GIS map locating 220/132/33 kV S/s & 132/33 kV S/s of PTCUL and 33/11 kV S/s alongwith their associated line is being enclosed as Annexure-A.

The coordinates of the proposed substations as well as the substations concerned to proposed substations are here under:

1. KATHGODHAM:

- 132/33 kV S/s Kathgodham - 29.24923, 79.53515
- 33/11 kV S/s Old Kathgodham - 29.24923, 79.53515
- **Proposed 33/11 kV S/s Kathgodham** - **29.2493214, 79.5353823**

2. GITI, DAHARIYA:

- 220/33 kV S/s Kamaluwaganja - 29.208623, 79.458752
- 33/11 kV S/s Kathghariya - 29.234914, 79.480115
- 33/11 kV S/s Kamaluwaganja - 29.210523, 79.464994
- **Proposed 33/11 kV S/s Govt. ITI, Dahariya** - **29.207187, 79.512696**

3. JAIPUR, PADLI:

- 220/33 kV S/s Kamaluwaganja - 29.208623, 79.458752
- 33/11 kV S/s Kamaluwaganja - 29.210523, 79.464994
- 33/11 kV S/s Kathghariya - 29.234914, 79.480115
- 33/11 kV S/s Transport Nagar - 29.192449, 79.514427
- **Proposed 33/11 kV S/s Jaipur, Padli** - **29.229906, 79.436666**

4. UPCL is required to furnish detail of 33 kV Bays at 220/132/33 kV S/s & 132/33 kV S/s of PTCUL that are catering the load of Haldwani region alongwith details of spare bays and availability of space for future expansion.

Submission of UPCL:

The details of 33 kV Bays at 220/132/33 kV S/s Kamluaganja & 132/33 kV S/s Kathgodam of PTCUL that are catering the load of Haldwani region are mentioned below:

A) 220/132/33 kV Substation Kamluaganja

- i. Bay/Feeder No. 01 : Kamluaganja
- ii. Bay/Feeder No. 02 : Kaladungi
- iii. Bay/Feeder No. 03 : T.P. Nagar
- iv. Bay/Feeder No. 04 : Haldwani Nagar
- v. Bay/Feeder No. 05 : Futkuan

- vi. Bay/Feeder No. 06 : Foolchaur
- vii. Bay/Feeder No. 07 : Katghariya

It is also to bring to kind information of Hon'ble Commission that there is no spare 33 kV Bay available at 220/132/33 kV S/s Kamluaganja, however space is available for construction of 04 no. 33 kV Bay in future.

B) 132/33 kV Substation Kathgodam

- i. Bay/Feeder No.1 : Kaladungi Chauraha
- ii. Bay/Feeder No.2 : Subhash Nagar
- iii. Bay/Feeder No.3 : Dhaulakheda
- iv. Bay/Feeder No.4 : H.M.T. Rani Bagh
- v. Bay/Feeder No.5 : Kathgodam

It is also to bring to kind information of Hon'ble Commission that there is no spare 33 kV Bay available at 220/132/33 kV S/s Kathgodham, however space is available for construction of 02 no. 33 kV Bay in future.

7. UPCL has proposed 12.5 MVA transformers for proposed 33/11 kV S/s at Kathgodam, Jaipur-Padli & Govt. ITI Dhariya. In this regard, UPCL is required to substantiate the reason for opting 12.5 MVA transformers only in all aforesaid proposed Substations. Further, UPCL is also required to submit Substation-wise details of 12.5 MVA transformers installed during last 5 years alongwith its cost.

Submission of UPCL:

To cater the transferred load from existing substations and to meet rapid future load growth of approx. 10%per annum in the concerned region, UPCL has proposed 12.5 MVA power transformers for the substations. The division-wise details of 12.5 MVA transformers installed during last 5 years and SIR/Weighted Average Cost (WAC) is being enclosed as Annexure-B.

The cost of 12.5 MVA Power Transformer installed during last 5 year on sample basis as per the SIR/Weighted Average Cost (WAC) issued by UPCL is as follows:

S. No.	Year of SIR/Weighted Average Cost (WAC) issued	Cost of 12.5 MVA Power Transformers (Rs.)
1	FY 2020-21	71,21,371.00
2	April-2021	68,88,204.00

3	April-2022	76,09,976.00
4	March-2023	89,92,970.00
5	Dec-2024	1,20,59,534.00 (Rates taken in instant petition)

9. UPCL under the justification section of its proposal for 33/11 kV Substations at Kathgodam, Jaipur-Padli & Govt. ITI-Dhariya has narrated the problem of under voltage at 11 kV networks. UPCL is required to substantiate the same with the MRI data of each outgoing 11 kV feeder for last 12 months.

Submission of UPCL:

The MRI data on sample basis of the meter installed at 33/11 kV Substation end of the following 11 kV outgoing feeders is sent through mail:

1. 11 kV Fatehpur Feeder emanating from 33/11 kV S/s Kathgariya.
2. 11 kV Lamachaur Feeder emanating from 33/11 kV S/s Kamaluwaganja.
3. 11 kV Mukhani Feeder emanating from 33/11 kV S/s Kamaluwaganja.
4. 11 kV Judge Farm Feeder emanating from 33/11 kV S/s T.P. Nagar.
5. 11 kV Peelikothi Feeder emanating from 33/11 kV S/s Kathgariya.

The MRI data shows the voltage at 11 kV feeder at substation end. However, the load is clustered at the tail end of the feeder, hence resulting the low voltage at the end of the feeders.

(B) Construction of 2x12.5 MVA, 33/11 kV Substation at Kathgodam, Haldwani, District-Nainital alongwith its associated 33 kV line:

4. UPCL is required to submit that how the requirement of 'N-1' line contingency shall be ensured for the proposed 33/11 kV Substation at Kathgodam in compliance with the Regulation 3.6(4) of UERC (Distribution Code) Regulations, 2018.

Submission of UPCL:

To ensure "N-1" contingency for the proposed 33/11 kV Substation at Kathgodam, construction of double circuit 33 kV underground line from 132/33 kV Substation, Kathgodam has been proposed and the cost is included in the estimates attached with the instant petition. The revised line diagram is being enclosed as Annexure-C.

5. UPCL has proposed the load growth of 1% per annum with payback period of 17 years 11 months for the proposed Substation. As the payback period of the proposed project is high and the load growth of the area is only 1% per annum which prima-

facie indicate that existing substation can cater load for another 5 years, UPCL is required to submit the rationale for proposing such S/s.

Submission of UPCL:

The 1x12.5 MVA Old Substation Kathgodham is situated in the premises of 132/33 kV Substation Haldwani owned by PTCUL. The land of existing Substation is required to be evacuated at the earliest. Therefore, new substation in place of augmentation of old one has been proposed. It is also to mention here that the nearby region of the substation is rapidly growing region with expected load growth of 10% per annum. The Cost Benefit Analysis submitted with the instant petition has been done while considering the expected load growth of 10% per annum. The revised Cost Benefit Analysis (CBA) is being sent by mail.

(C) Construction of 2x12.5 MVA, 33/11 kV S/s at Jaipur, Padli, Haldwani, District-Nainital alongwith its associated 33 kV line:

5. *UPCL is required to submit that how the requirement of 'N-1' line contingency shall be ensured for the proposed 33/11 kV Substation at Jaipur-Padli in compliance with the Regulation 3.6(4) of UERC (Distribution Code) Regulations, 2018.*

Submission of UPCL:

*To ensure "N-1" contingency of the proposed 33/11 kV S/s at Jaipur, Padli, construction of a single circuit 08 km., 33 kV line from 220/33 kV S/s Kamaluwaganja and another single circuit 5 km., 33 kV line from 33/11 kV Substation Kathghariya has been proposed and the cost is included in the estimates attached with the instant petition. The revised line diagram **is being enclosed as Annexure-D.***

6. *UPCL has proposed the load growth of 1% per annum with payback period of 12 years 10 months for the proposed Substation. It is observed that existing substations have sufficient transformation capacity and prima-facie indicates that transformation capacity at existing substation can easily cater load for another 10-15 years considering 1% load growth. UPCL is required to submit the rationale for proposing the proposed Substation.*

Submission of UPCL:

The existing substations Kamaluwaganja & Kathgariya are situated in rapidly growing area with the expected load growth of 10% per annum. Therefore, the

proposed 33/11 kV Substation at Jaipur, Padli is required to share the load of these substations and to cater the upcoming load in and around Jaipur, Padli. The Cost Benefit Analysis submitted with the instant petition has been done while considering the expected load growth of 10% per annum. The revised Cost Benefit Analysis (CBA) is being sent by mail.

(D) Construction of 2x12.5 MVA, 33/11 kV S/s at Govt. ITI, Dahariya, Haldwani, District-Nainital alongwith its associated 33 kV line:

3. UPCL is required to submit the rationale for considering the cost of Rs. 75 Lakhs against 33 kV Bay in its estimates.

Submission of UPCL:

*The cost of 33 kV Bay at 220/33 kV Substation Kamaluwaganja has been taken on the basis of previous estimated cost as informed by PTCUL. However, the same shall be deposited on actual basis as per PTCUL requirement. It is to bring to kind notice of Hon'ble Commission that the cost for construction of 33 kV Bay at 132/33 kV Substation Kathgodam as informed by PTCUL vide its letter no. 434, dated: 25-04-2025 is Rs. 91,30,462.00. Estimate for 33 kV Bay at 132/33 kV Substation Kathgodam **is being enclosed as Annexure-E.***

5. UPCL is required to submit that how the requirement of 'N-1' line contingency shall be ensured for the proposed 33/11 kV Substation at Govt. ITI, Dahariya in compliance with the Regulation 3.6(4) of UERC (Distribution Code) Regulations, 2018.

Submission of UPCL:

*To ensure "N-1" contingency of proposed 33/11 kV S/s at Govt. ITI, Dahariya, construction of a single circuit 8.5 Km., 33 kV line from 220/33 kV S/s Kamaluwaganja and another single circuit 0.6 Km., 33 kV line from Dr. Sushila Tiwari Hospital has been proposed and the cost is included in the estimates attached with the instant petition. The space for construction of 33 kV Bay is available and cost provision for outgoing Bay at Dr. Sushila Tiwari Hospital is an intergral part of the estimate. The revised line diagram **is being enclosed as Annexure-F.***

6. UPCL has proposed the load growth of 1% per annum with payback period of 10 years 04 months for the proposed Substation. It is observed that existing substations have sufficient transformation capacity and prima-facie indicates that

transformation capacity at existing substation can easily cater load for another 10-15 years considering 1% load growth. UPCL is required to submit the rationale for proposing the proposed Substation.

Submission of UPCL:

The existing substations Kamaluwaganja, Kathgariya and Transport Nagar are situated in a rapidly growing area with expected load growth of 10% per annum. Therefore, the proposed 33/11 kV Substation at Govt. ITI, Dahariya is required to share the load of these substations and to cater the upcoming load in and around Govt. ITI, Dahariya. The Cost Benefit Analysis submitted with the instant petition has been done while considering the expected load growth of 10% per annum. The revised Cost Benefit Analysis (CBA) is being sent by mail."

Commission's Observations, Views & Directions: -

13. Based on the examination and analysis of the proposal & subsequent submissions made by the Petitioner before the Commission, the observations, views & directions of the Commission are as follows:
 - (1) The proposed investment has been accorded in the 121st BoD on dated 26.12.2024 and the estimated cost of the project is Rs. 7792.69 Lakh, which shall be met through loan (70%) from REC and Equity (30%) from the State Government or from internal resources.
 - (2) With regard to the land for the proposed 03 nos. 33/11 kV Substations at Kathgodam, Haldwani, Govt. ITI, Dahariya, Haldwani and Jaipur, Padli, Haldwani, the Petitioner in its submission dated 28.04.2025 has submitted that the land for proposed 33/11 kV Substation Kathgodam is property of UPCL. The land for proposed 33/11 kV Substation GITI, Dahariya has been provided by Revenue Department and is in UPCL's possession and a boundary wall has been constructed in the said land. However, with regard to the 33/11 kV Substation proposed at Jaipur, Padli, Haldwani, the Petitioner has submitted that the District Revenue Department has sent the proposal to GoU for transfer of identified land for the said Substation.

In this regard, the Commission has observed that the Petitioner is in possession of the required land for 02 Nos. Substations namely Kathgodam, Haldwani & Govt. ITI Dahariya, Haldwani, whereas, the land for the proposed Substation at Jaipur, Padli, Haldwani is yet to be acquired.

14. Project specific observations and Commission's Views are discussed hereunder: -

2x12.5 MVA, 33/11 kV Substation at Kathgodam, Haldwani and its associated 33 kV lines

- (1) With regard to the line chart for proposed 33/11 kV Substation at Kathgodam it is observed that the Petitioner has proposed to shift 'a load of 619 amperes at 11 kV from 33/11 kV Substation Old Kathgodam' to the proposed 33/11 kV Substation at Kathgodam. Whereas, the Petitioner in its Cost Benefit Analysis sheet (annexed in the Petition) indicated that the anticipated new load would be 525 amperes at 11 kV. This prima-facie indicated that the Petitioner has either committed an error while preparing its Single Line Diagram in pre & post scenario or has over projected the anticipated new load in its Cost Benefit Analysis sheet. During the discussions with officers of the UPCL on 29.04.2025, it has been submitted that the information submitted in the Petition had a typographical error and the anticipated new load at the proposed Substation is 38 amps instead of 525 amperes
- (2) Further, with regard to the Cost Benefit Analysis (CBA) submitted by the Petitioner for the said project, the Commission has observed that the Petitioner has computed the same considering 1% load growth. On enquiring in this issue, UPCL has submitted a revised submission dated 29.04.2025 stating that actually the load growth envisaged in the CBA calculation is 10% in place of 1%. In this regard, the Commission cautions the licensee that before submitting any proposals/information the Petitioner should meticulously verify the data/information/document etc. Further, the Commission is of the view that the Petitioner should prudently estimate and design the proposed Substations so that optimum utilization of resources is ensured.

- (3) With regard to the cost estimates submitted by the Petitioner, it has been observed that the Petitioner has included Annual Maintenance Charges (AMC) for 5 Years after 2 Years of warranty as Rs. 3 Crore in its estimates and has further grossed-up the estimates by applying GST, contingency charges @ 3%, centage charges @ 15% and labour Cess @ 1% over and above it. In this regard, the Commission is of the view that the aforesaid charges of AMC, beyond warranty period should not be a part of capital investment and rather it is a mechanism of off-loading the duty of maintenance of the assets to external agencies. This by anyway do not qualify as capital expenditure. Moreover, the same has been estimated @ Rs. 5 Lakh per month purely based on assumption. Further, the Commission is of the view that the Petitioner should prudently estimate and attempt to optimize the AMC charges.
- (4) With regard to the under-voltage problem to the tune of 8.5 kV-9.5 kV as narrated in the justification section of its Petition at 04 nos. 11 kV feeders namely Mukhani, Town-2, Town-3 and Hydel Colony emanating from 33/11 kV Substation Old Kathgodam, Haldwani, it has been observed that UPCL was asked to substantiate its aforesaid claim through the MRI data of 11 kV feeders. UPCL at first instance did not furnish the desired data however, later submitted that the voltage level at the tail end of the 11 kV network tend to reach as low as 8.5 kV to 9.5 kV. The Commission is of the view that 11 kV feeders grappling with the problem of under voltage could be due to over loading. This can be mitigated by either bifurcating the 11 kV feeders or by appropriately compensating through capacitor banks.
- (5) The Commission is of the view that the Petitioner should optimize the proposed Substation capacity based on the existing and anticipated future load. However, considering the fact mentioned in the Petition that the existing 1x12.5 MVA 33/11 kV Substation at Old Kathgodam is to be vacated at the earliest as the same is in the premise of PTCUL, the Commission is of the view that the proposal of the Petitioner can be seen as an opportunity not only for relocating its assets but to augment its capacity

for catering the future load growth requirement and improving the quality and reliability of power supply for the consumers.

2x12.5 MVA, 33/11 kV Substation at Govt. ITI, Dahariya, Haldwani and its associated 33 kV lines

- (1) With regard to the line chart for proposed 33/11 kV Substation at Govt. ITI, Dahariya, Haldwani, it is observed that the Petitioner has proposed to shift 'a load of 160 amperes at 11 kV from 33/11 kV Substation Kamaluaganj', '85 amperes at 11 kV from 33/11 kV Substation Kathghariya' and '145 amperes at 11 kV from 33/11 kV Substation at Transport Nagar' to the proposed 33/11 kV Substation at Govt. ITI, Dahariya, Haldwani i.e. in totality 390 amperes at 11 kV. Whereas, the Petitioner in its Cost Benefit Analysis sheet indicated that the anticipated new load would be 525 amperes at 11 kV. This prima-facie indicated that the Petitioner has either committed an error while preparing its Single Line Diagram in pre & post scenario or has over projected the anticipated new load in its Cost Benefit Analysis sheet. During the discussions with officers of the UPCL on 29.04.2025, it has been submitted that the information submitted in the Petition had a typographical error and the anticipated new load at the proposed Substation is 125 amperes instead of 525 amperes
- (2) Further, with regard to the Cost Benefit Analysis (CBA) submitted by the Petitioner for the said project, the Commission has observed that the Petitioner has computed the same considering 1% load growth. On enquiring about the issue, UPCL has submitted a revised submission dated 29.04.2025 stating that actually the load growth envisaged in the CBA calculation is 10% in place of 1%. In this regard, the Commission cautions the licensee that before submitting any proposals/information the Petitioner should meticulously verify the data/information/document etc. Further, the Commission is of the view that the Petitioner should prudently estimate and design the proposed Substations so that optimum utilization of resources is ensured.

- (3) With regard to the cost estimates submitted by the Petitioner, it has been observed that the Petitioner has included AMC charges for 5 Years after 2 Years of warranty as Rs. 3 Crore in its estimates and has further grossed-up the estimates by applying GST, contingency charges @ 3%, centage charges @ 15% and labour Cess @ 1% over and above it. In the regard, the Commission is of the view that the aforesaid charges of AMC, beyond warranty period should not be a part of capital investment and rather it is a mechanism of offloading the duty of maintenance of the assets to external agencies. This by anyway do not qualify as capital expenditure. Moreover, the same has been estimated @ Rs. 5 Lakh per month purely based on assumption. Further, the Commission is of the view that the Petitioner should prudently estimate and attempt to optimize the AMC charges.
- (4) With regard to the under-voltage problem to the tune of 8.5 kV-9.5 kV as narrated in the justification section of its Petition at 05 nos. 11 kV feeders namely Farm No. 03, Dahariya, Kusumkheda, Mukhani & Pilikhoti emanating from 33/11 kV Substation Transportnagar, Kamaluaganj & Kathghariya. It has been observed that UPCL was asked to substantiate its aforesaid claim through the MRI data of 11 kV feeders. UPCL at first instance did not furnish the desired data however, later submitted that the voltage level at the tail end of the 11 kV network tend to reach beyond the permissible limit of -9%. The Commission is of the view that 11 kV feeders grappling with the problem of under voltage could be due to over loading. This can be mitigated by either bifurcating the 11 kV feeders or connecting the feeder through the proposed 33/11 kV Substation or by appropriately compensating through capacitor banks.
- (5) The Commission is of the view that the Petitioner is attempting to create new infrastructure without following the principle of optimization of assets and estimates based on the prudent calculations. The Commission is of the view that the Petitioner should optimize the proposed Substation capacity based on the existing and anticipated future load. However, considering the submission made at Justification section of the Petition, the Commission is of the view that the proposal of the Petitioner is expected to ease the loading

on the existing Substations namely 33/11 kV Substation Kamaluaganj, 33/11 kV Substation Kathghariya and 33/11 kV Substation Transport Nagar besides improving the quality and reliability of power supply for the consumers.

2x12.5 MVA, 33/11 kV Substation at Jaipur, Padli, Haldwani and its associated 33 kV lines

- (1) With regard to the land for the proposed Substation at Jaipur, Padli, Haldwani, it is observed that the land for the same is yet to be acquired. Therefore, the Commission is of the view that the Petitioner should make its utmost efforts for acquiring the land within 06 months of this Order else the Petitioner would be required to seek a fresh approval for the proposal pertaining to construction of 2x12.5 MVA 33/11 kV Substation at Jaipur, Padli, Haldwani.
- (2) With regard to the line chart for proposed 33/11 kV Substation at Jaipur, Padli, Haldwani, it is observed that the Petitioner has proposed to shift a load of 180 amperes at 11 kV from 33/11 kV Substation Kathghariya and 125 amperes at 11 kV from 33/11 kV Substation Kamaluaganj to the proposed 33/11 kV Substation at Jaipur, Padli, Haldwani i.e. in totality 305 amperes at 11 kV. Whereas, the Petitioner in its Cost Benefit Analysis sheet indicated that the anticipated new load would be 525 amperes at 11 kV. This prima-facie indicated that the Petitioner has either committed an error while preparing its Single Line Diagram in pre & post scenario or has over projected the anticipated new load in its Cost Benefit Analysis sheet. During the discussions with officers of the UPCL on 29.04.2025, it has been submitted that the information submitted in the Petition had a typographical error and the anticipated new load at the proposed Substation is 110 amperes instead of 525 amperes
- (3) Further, with regard to the Cost Benefit Analysis (CBA) submitted by the Petitioner for the said project, the Commission has observed that the Petitioner has computed the same considering 1% load growth. On enquiring about the issue, UPCL has submitted a revised submission dated

29.04.2025 stating that actually the load growth envisaged in the CBA calculation is 10% in place of 1%. In this regard, the Commission cautions the licensee that before the submitting any proposals/information the Petitioner should meticulously verify the same. Further, the Commission is of the view that the Petitioner should prudently estimate and design the proposed Substations so that optimum utilization of resources is ensured.

- (4) With regard to the cost estimates submitted by the Petitioner, it has been observed that the Petitioner has included AMC charges for 5 Years after 2 Years of warranty as Rs. 3 Crore in its estimates and has further grossed-up the estimates by applying GST, contingency charges @ 3%, centage charges @ 15% and labour Cess @ 1% over and above it. In the regard, the Commission is of the view that the aforesaid charges of AMC, beyond warranty period should not be a part of capital investment and rather it is a mechanism of offloading the duty of maintenance of the assets to external agencies. This by anyway do not qualify as capital expenditure. Moreover, the same has been estimated @ Rs. 5 Lakh per month purely based on assumption. Further, the Commission is of the view that the Petitioner should prudently estimate and attempt to optimize the AMC charges.
- (5) With regard to the under-voltage problem to the tune of 8.5 kV-9.5 kV as narrated in the justification section of its Petition at 03 nos. 11 kV feeders namely Lamachaur, Basani and Fatehpur emanating from 33/11 kV Substations Kamaluaganj & Kathghariya. It has been observed that UPCL was asked to substantiate its aforesaid claim through the MRI data of 11 kV feeders. UPCL at first instance did not furnish the desired data however, later submitted that the voltage level at the tail end of the 11 kV network tend to reach beyond the permissible limit of -9%. The Commission is of the view that 11 kV feeders grappling with the problem of under voltage could be due to over loading. This can be mitigated by either bifurcating the 11 kV feeders or by appropriately compensating through capacitor banks.
- (6) With regard to the usage of AAAC covered conductor at 33 kV incomer for the proposed Substation at Jaipur, Padli, Haldwani emanating from 33/11 kV Substation Kathghariya, the Petitioner has submitted that the same has

been envisaged considering the fact that the 33 kV line proposed for 33/11 kV Substation Jaipur (Padli) is passing through dense populated area, the route already have 11 kV LT lines. Therefore, in view of safety and to ensure continuous power supply AAAC covered conductor has been utilized.

In this regard, the Commission has observed that AAAC covered conductor has sufficient ampere capacity to cater the load of the proposed Substation. However, the 33 kV feeder emanating from 220/33 kV Substation Kamaluaganj to 33/11 kV Substation Kathghariya is on Dog/Panther conductor which *prima-facie* indicates that a weak link in the system is existing, which in future has to cater load of not only 2x12.5 MVA 33/11 kV Substation Kathghariya but also load of proposed 2x12.5 MVA 33/11 kV Substation at Jaipur, Padli, Haldwani.

In this context, the Commission is of the view that the Petitioner should ensure that such weak links in the electrical network be proposed for strengthening in the proposal stage itself as the same *prima-facie* depict poor planning and estimation at the distribution licensee's end.

- (7) The Commission is of the view that the Petitioner is attempting to create new infrastructure without following the principle of optimization of assets and estimates based on the prudent calculations. The Commission is of the view that the Petitioner should optimize the proposed Substation capacity based on the existing and anticipated future load. However, considering the submission made at Justification section of the Petition, the Commission is of the view that the proposal of the Petitioner is expected to ease the loading on the existing Substations namely 33/11 kV Substation Kamaluaganj and 33/11 kV Substation Kathghariya besides improving the quality and reliability of power supply for the consumers.

15. With regard to the cost of 12.5 MVA transformer, the Commission has observed that the prices of the same have increased exponentially over last 03-04 years. In this regard, the Commission is of the view that the Petitioner should make its all efforts for optimizing the cost of the same by following open competitive bidding process.

16. With regard to the claim of expenditure against cost of 1 no. 33 kV bay for the proposals pertaining to Substations at Govt. ITI, Dahariya, Haldwani and Jaipur, Padli, Haldwani, the Commission has observed that the Petitioner has included an expenditure of Rs. 75 Lakhs in their estimates of the aforesaid proposals, whereas, the same has to be incurred by the transmission licensee under whose jurisdiction the said 33 kV bay falls as per the provisions of Regulation 3.4.3(11) of UERC (The Electricity Supply Code, Release of New LT Connections and Related Matters) Regulations, 2020, which stipulates that *"In cases, where supply of electricity to premises applied for requires commissioning of new sub-station/bay, the distribution/transmission Licensee shall ensure completion of the works on the new substation/bay. However, the cost of the works pertaining to new substation/bay shall be borne by the respective Licensee (distribution or transmission) ..."*. The said Regulation explicitly states that the cost of works pertaining to bay shall be borne by transmission Licensee, if the proposed bays are constructed in the premises of the transmission Licensee.
17. With regard to 'N-1' line contingency, the responsibility of long-term planning of distribution system lies with the distribution licensee and the licensee is required to comply with the Regulation 3.6(4) of UERC (Distribution Code) Regulations, 2018, which stipulates that:

"(4) In every Sub-Station of capacity 10 MVA and above there shall be a provision for obtaining alternate 33 kV supply to the Sub-Station in case of a failure in the incoming supply."

In this regard, the Commission has observed that initially the Petitioner in its Petition had depicted 'N-1' line contingency provision in none of the proposed '33/11 kV Substation at Kathgodam, Haldwani', '33/11 kV Substation at Govt. ITI, Dahariya, Haldwani' and '33/11 kV Substation at Jaipur, Padli, Haldwani', however, the Petitioner in its revised submission depicted 'N-1' line contingency provision in all the aforesaid proposals. Further, the Commission is of the view that the responsibility of long-term planning of distribution system lies with the distribution licensee and therefore, the Petitioner should strengthen its 33 kV line

network inline with the aforesaid provisions of Regulation 3.6(4) of UERC (Distribution Code) Regulations, 2018.

In this regard, the Commission cautions the licensee that before the submitting any proposals/information UPCL should meticulously verify the data/information/document etc.

18. In light of the above, the Commission grants in principle approval for the proposed '33/11 kV Substation at Kathgodam, Haldwani', '33/11 kV Substation at Govt. ITI, Dahariya, Haldwani' and '33/11 kV Substation at Jaipur, Padli, Haldwani', subject to strict fulfillment of terms and conditions as mentioned below:-

- (1) **The Petitioner shall ensure to acquire land for construction of proposed 2x12.5 MVA 33/11 kV Substation at Jaipur, Padli, Haldwani within 06 months of this Order else the Petitioner shall be required to file a Petition afresh.**
- (2) The Petitioner is directed to go for the competitive bidding for obtaining most economical prices from the bidders under the prevailing Rules & Regulations.
- (3) The Petitioner must submit the detailed sanctioned letter from the Financial Institution, if any, to the Commission as soon as they get approval for the same. All the loan conditions as may be laid down by the funding agency in their detailed sanction letter should be strictly complied with. However, the Petitioner is directed to explore the possibility of swapping the loan with cheaper debt option.
- (4) The Commission may verify/check the proposed works to be executed by the Petitioner at any point of time during/post execution of the works from the perspective of not only substantiating that the assertions & commitments made by the Petitioner have been fully complied and correct, but also to assess Quality, Optimum utilization of resources, Benefits accrued from the proposed investments etc. as has been projected by the Petitioner.

- (5) Post execution of the project, the Petitioner shall submit the Project Completion Report to the Commission alongwith photographs, expenditure incurred/completed cost, financing of the Project and detailed analysis & calculations of the benefits accrued from the proposed investments etc.
- (6) The Petitioner shall ensure to furnish feeder-wise as-built drawings clearly depicting the works executed under the projects. Further, post execution of the proposed works, the Petitioner is directed to furnish the GPS co-ordinates of the 33 kV Poles and 33/11 kV Substations.
- (7) The Petitioner shall comply to the following CEA and UERC Regulations and amendments thereof at every step of the Construction and Operation & Maintenance of the lines & Substation. The Petitioner shall also ensure the compliance of relevant standards, and the Project should be executed with safety and due diligence so that minimal incidents of break downs/fault occurrences/hindrances are faced during operation & maintenance:
 - (a) Central Electricity Authority (Safety requirements for construction, operation and maintenance of electrical plants and electric lines) Regulations, 2011.
 - (b) Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022.
 - (c) Central Electricity Authority (Measures relating to Safety and Electricity Supply) Regulations, 2023.
 - (d) UERC (Distribution Code) Regulations, 2018.
- (8) 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 (if any) agreed by the State Government or any other source in respect of the proposed schemes.
- (9) After completion of the aforesaid schemes, the Petitioner shall submit the completed cost and financing of the schemes.

- (10) 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.
- (11) The approval is given subject to the above conditions and on the basis of submissions and statement of facts made by the Petitioner in the Petition under affidavit. In case of violations of any of the condition mentioned above or in case any information provided, if at any time, later on, found to be incorrect, incomplete or in case relevant information was not disclosed, that materially affects the basis for granting the approvals, in such cases, the Commission may cancel the approval or refuse to allow all or part of the expenses incurred in the ARR/True-up apart from initiating plenary action.

Ordered accordingly.

(Anurag Sharma)
Member (Law)

(M.L. Prasad)
Chairman