

Before
UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

Petition No. 36 of 2022

In the Matter of:

Petition for seeking approval for the investment on the following projects:

- (a) Construction of 33 kV line from Generator's Switching Station at Village-Duguda, Ranikhet (Almora) to 132/33 kV Substation Naini (Ranikhet) and 01 No. 33 kV "BAY" at 132/33 kV Substation Naini (Ranikhet) to evacuate Power Generated by 03 No. Solar Photovoltaic Power Plant.**
- (b) Construction of 33 kV line from generator's Switching Station Village-Patlibagad to 132/33 kV Substation Syalidhar (Almora) to evacuate Power Generated by 06 No. Solar Photovoltaic Power Plants.**
- (c) Construction of 33/11 kV Substation alongwith its associated 33 kV line at Nakot, Tehri (Garhwal).**

And

In the Matter of:

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

...Petitioner

Coram

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

Date of Order: June 05, 2023

ORDER

This Order relates to the Petition filed by Uttarakhand Power Corporation Limited (UPCL) (hereinafter referred to as "UPCL" or "the Petitioner" or "the licensee") seeking prior approval of the Commission for investment on the (a) Construction of 33 kV line from Generator's Switching Station at Village-Duguda, Ranikhet (Almora) to 132/33 kV Substation Naini (Ranikhet) alongwith 01 No. 33 kV "BAY" at 132/33 kV Substation Naini (Ranikhet) Almora to evacuate Power Generated by 03 No. Solar Photovoltaic Power Plant (b) Construction of 33 kV line from generator's Switching Station Village-Patlibagad to 132/33 kV Substation Syalidhar (Almora) alongwith 01 No. 33 kV "BAY" at 132/33 kV Substation Syalidhar (Almora) to evacuate Power Generated by 06 No. Solar Photovoltaic

Power Plants (c) Construction of 33/11 kV Substation alongwith its associated 33 kV line at Nakot, Tehri (Garhwal).

Background

2. The Petitioner has filed its Petition vide its letter No. 2565/D(P)/UPCL/UERC/(C-4) dated **27.09.2022** under clause 11 of Distribution and Retail Supply Licence and Regulation 40 of Uttarakhand Electricity Regulatory Commission (Conduct of Business) Regulations, 2014 which stipulates that licensee shall obtain prior approval of the Commission for making investment in the licensed business if such investment is above the limits laid down by the Commission in the Licensee Conditions i.e. investment exceeding Rs. 2.5 Crore.
3. The Petitioner under 'Facts of the case' has submitted that:-

“

- (i) *With a view to ensure smooth evacuation of power generated from 09 No. solar photovoltaic power, the applicant company has proposed the following works:*

- (a) *Construction of 33 kV line from Generator's Switching Station at Village-Duguda, Ranikhet (Almora) to 132/33 kV Substation Naini (Ranikhet) and 01 No. 33 kV "BAY" at 132/33 kV Substation Naini (Ranikhet) to evacuate Power Generated by following 03 No. Solar Photovoltaic Power Plants.*

S. No.	Name of Generator	Capacity (kWp)	Tariff (Rs. kWh)
1	M/s Rastogi Green Energy Pvt. Ltd.	2000	4.37
2	M/s D.S. Smart Energy Pvt. Ltd	4000	4.37
3	M/s Suman Gupta Green Energy Pvt. Ltd.	4000	4.37

- (b) *Construction of 33 kV line from generator's Switching Station Village-Patlibagad to 132/33 kV Substation Syalidhar (Almora) to evacuate Power Generated by following 06 No. Solar Photovoltaic Power Plants.*

S. No.	Name of Generator	Capacity (kWp)	Tariff (Rs. kWh)
1	M/s Bindal Solar Energy Pvt. Ltd.	3000	4.38
2	M/s Jindal Solar Power Solution Pvt. Ltd.	2000	4.38
3	M/s Jindal Akshay Urja Pvt. Ltd.	3000	4.38
4	M/s G.S. Renewable Energy Solution Pvt. Ltd	2000	4.38
5	M/s Jindal Greentek Energy Solutions Pvt. Ltd.	3000	4.13
6	M/s OSD Solar Pvt. Ltd.	2000	4.49

- (c) *The total estimated cost of the above projects/lines is Rs. 8.07 Cr., which shall be met through loan (70%) from REC and Equity (30%) from State Government. Both the lines are to be constructed for evacuation of power generated by solar photovoltaic power plant being constructed under Clause No. 41 (3) "Evacuation of Power" of Hon'ble UERC Regulation' 2018 regarding tariff and other terms*

for supply of electricity from renewable sources and non-fossil fuel based Co-generating Stations. The project is proposed to be implemented on partially turnkey basis. The duration of the project is 18 months from date of approval. The details of 33 kV lines are as follows:

Abstract of Details of 33 kV lines

S.No.	Name of Project	District	Fund Resources	BoD Approval	Capacity	Length of 33 kV Line (km)	Total Cost (Rs. In Lakh)
1	Construction of 33 kV line from Generator's Switching Station at Village-Duguda, Ranikhet to 132/33 kV Substation Naini (Ranikhet)and 01 No. 33 kV "BAY" at 132/33 kV Substation Naini (Ranikhet) to evacuate Power Generated by different Solar Photovoltaic Power Plants	Almora	Internal Resources ((70 % Loan from M/s REC + 30% (Government equity))	Approved in 105 th BoD	10 MWP	5.20	273.13
2	Construction of 33 kV line from generator's Switching Station Village-Patlibagad to 132/33 kV S/s Syalidhar (Almora) to evacuate Power Generated by 06 No. different Solar Photovoltaic Plants				15 MWP	13.56	534.26
Total					-	18.76	807.39

- (ii) Further, to ensure reliable power supply, improved voltage profile and to meet future load growth the applicant company has proposed 2x3 MVA, 33/11 KV Substation at Nakot (Tehri). The details of substations and its line are as follows:

Abstract of Details of 33 kV Substation and its 33 kV lines

Sl. No.	Name of Project	District	Fund Resources	BoD Approval	Capacity	Length of 33 kV Line (km)	Total Cost (Rs. In Lakh)
1	Construction of 01 No. new 33/11 KV Substation alongwith its associated 33 kV line at Nakot, Tehri (Garhwal)	Tehri (G)	Internal Resources ((70 % Loan from M/s REC + 30% Government equity))	Approved in 105 th BoD	2x3 MVA	10.00	308.61
Total					-	10.00	308.61

The total cost of the projects is Rs. 3.09 Cr., which shall be met through loan (70%) from REC and Equity (30%) from State Government. The substation in proposal has already been completed and post-facto approval on investment is being requested. The project is implemented on turnkey basis.

- (iii) The detailed project reports of above two investments mentioned at Serial No. (i) and (ii) above, 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.

Further, the sanction letter from REC for the construction of 33/11 kV Substation Nakot is enclosed herewith at Annexure-B and with regard to the investment of 33 KV Lines for Solar Generators as proposed at Serial No. (i) a request letter to M/s REC for sanction the loan has been sent and is enclosed herewith as Annexure-C. Furthermore, the approval from BoD for all the projects is enclosed herewith at Annexure-D."

4. The Petitioner has enclosed DPRs and certified true copy of the resolution passed by the BoD in 105th BoD meeting held on 30.08.2022 for the proposed works in its Petition.

Further, the Petitioner has also enclosed copy of sanction letter No. 15 dated 24.06.2020 of M/s REC, New Delhi for sanction of 70% loan for construction of 33/11 kV S/s Nakot and has also enclosed copy of its letter No. 668 dated 24.09.2022 sent to M/s REC, New Delhi for debt financing of the proposed investments for construction of 33 kV line to evacuate power generated from Solar PV projects at Vill-Duguda, Ranikhet to 132/33 kV S/s Naini (Ranikhet) and 33 kV line to evacuate power generated from Solar PV projects at Vill-Syalidahr (Almora) to 132/33 kV S/s Syalidhar (Almora).

5. On examination of the submissions made in the Petition, certain deficiencies/infirmities were identified and accordingly, the Commission vide its letter No. 859 dated 13.10.2022 directed the Petitioner to submit/furnish its compliance on the following latest by 31.10.2022:-

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(A) General

1. UPCL in 'abstract the details of 33 kV lines' has mentioned fund sources as 'internal resources (70% loan from M/s REC & 30% Government equity)'. UPCL is required to clarify how 70% loan component can be considered as internal resource.
2. The interest and cash flow computation in the payback period calculation appears to be incorrect. UPCL is required to recheck and resubmit the payback period calculation for the proposed works.
3. UPCL is required to furnish the details of forest clearances for the proposed power evacuations lines from switching sub-stations up to the nearest HV/EHV substations.
4. UPCL is required to furnish the project-wise copy of stock issue rate/schedule of rates considered for preparing the estimates for the proposed works.
5. UPCL is required to clarify regarding the ownership of lines/Switching stations from Solar Power Plants up to Switching stations at Duguda (Ranikhet) and at Patlibagad (Almora). Further, UPCL is required to confirm regarding the entity who has borne the

cost of construction of the lines from Solar Power Plants upto switching station and cost of construction of the switching substation. Moreover, UPCL is required to confirm how the responsibility of construction of power evacuation line from switching station up to nearest HV/EHV substation lies with it.

6. UPCL is required to furnish the project-wise details of land acquisitions, wherever required and its status for the proposed works.
7. The proviso of Regulation 41 (2) of UERC (Tariff and other terms for supply of electricity from renewable energy sources and non-fossil fuel based co-generating stations) Regulations, 2018 allow the pooling of power from more than one generator through the common pooling switching station, if the total cumulative installed capacity is more than 25 MW. Further, the Transmission Licensee shall have to provide the connectivity at its nearest substation. In this regard, UPCL is required to clarify how it is proposing construction of evacuation line from such common pooling switching station which is pooling the power of solar generators having cumulative installed capacity below 25 MW. Further, UPCL is required to clarify under which Regulation the distribution licensee is allowed to construct the evacuation line from switching station to the nearest S/s of Transmission Licensee.
8. UPCL has submitted that the projects mentioned at Sl. No.1 & 2 of its instant Petition are proposed to be implemented on 'Partially Turnkey Basis' and project mentioned at Sl. No. 3 is implemented on 'Turnkey Basis'. UPCL is required to clarify regarding the term 'Partial Turnkey Basis' alongwith scope of work for the aforesaid projects qualifying it as the same.

(B) 33 kV line from Dhankal & Dugada, Ranikhet (Almora) to 132/33 kV S/s Naini (Ranikhet) & 33 kV Bay at Naini

1. UPCL has proposed works amounting to Rs. 2.73 Crore for construction of 33 kV power evacuation line from switching station at Duguda to 132/33 kV S/s Naini wherein, 01 No. 33 kV bay has been proposed at 132/33 kV S/s Naini. In this regard, it is observed that the proposed bay would fall under the ambit of PTCUL, however, UPCL is proposing an expenditure of approx. Rs. 70 Lakhs for construction of 33 kV outgoing bay. Further, it is observed that the creation of asset falling under the ambit of other Licensee and claim of expenditure on asset by another Licensee would unnecessarily complicate the Tariff recovery process for capital expenditure and O&M expenditure thereafter.

Therefore, UPCL is required to furnish the rationale/reasons for claiming the aforesaid proposed expenditure of Rs. 70 Lakhs under its head of seeking prior investment approval whereas, the same do not specifically fall under its jurisdiction.

2. UPCL has not enclosed detailed cost estimate for the proposed works amounting to Rs. 2.73 Crores.

UPCL is required to furnish the same.

3. UPCL has submitted the supplementary agreement signed with Solar Generators namely M/s Rastogi Green Tech Energy Private Limited and M/s DS Smart Energy Private Limited. According to the supplementary agreements the proposed 33 kV switching substation at village Duguda, Ranikhet will have to be connected with

existing 33 kV line connecting both 132 kV S/s Naini and 33/11 kV S/s Bagwalipokhar. Thus, UPCL is required to submit the details of existing 33 kV line i.e. connected with 132 kV S/s Naini and 33/11 kV S/s Bagwalipokhar alongwith the single line diagram clearly indicating its distance from the proposed 33 kV switching substation, 132/33 kV S/s Naini and 33/11 kV S/s Bagwalipokhar respectively. Further, it is required to clarify the reason for taking power evacuation line upto 132/33 kV S/s and not to 33 kV Bagwalipokhar S/s which falls under its jurisdiction.

While calculating the 'Profit generated annually' in the 'Calculation of Payback Period' sheet, UPCL has proposed the formula of ' $H=E+D-C-F-G$ ' where 'D' indicates the 'loss @ 15% (units)', UPCL is required to justify the rationale for addition of 'D' while calculating the annual profit of the project.

4. UPCL has submitted the details of three solar generators along with its capacity and tariff for which UPCL has proposed the construction of 33 kV evacuation line. Out of three solar generators, UPCL has indicated the tariff of Rs. 4.37 per kWh for the generator namely 'M/s Suman Gupta Green Energy Pvt. Ltd.'. However, during the examination of the documents submitted by UPCL, it has been observed that UREDA vide its LoA dated 18.07.2019 has allotted the aforesaid project at tariff of Rs 4.49/kWh. UPCL has also considered the tariff of Rs 4.37 per kWh for aforesaid project while calculating the cost benefit analysis of its proposed investment. In this regard, UPCL is required to clarify regarding the aforesaid deviation in the Tariff.

(C) 33 kV line from Patlibagad (Almora) to 132/33 kV Substation Syalidhar (Almora) & 33 kV Bay at Syalidhar

1. UPCL is proposing to construct 01 No. bay at 132/33 kV S/s Syalidhar (Almora) for evacuation of 15 MW power generated by 06 Nos. Solar Power Plants amounting to Rs. 70 Lakhs for '33 kV Outgoing Bay'. In this regard, it is observed that the proposed bay would fall under the ambit of PTCUL as discussed above.

Therefore, UPCL is required to furnish the rationale/reasons for claiming the aforesaid proposed expenditure of Rs. 70 Lakhs under its head of seeking prior investment approval whereas, the same do not specifically fall under its jurisdiction.

2. UPCL has not enclosed detailed cost estimate for the proposed works amounting to Rs. 5.34 Crores.

UPCL is required to furnish the same.

3. UPCL has submitted the details of 6 Nos. solar generators as per the following details:

Sl. No.	Name of Generator	Capacity (kWp)	Tariff (Rs. kWh)
1	M/s Bindal Solar Energy Pvt. Ltd., (Mrs. Isha Agarwal)	3000	4.38
2	M/s Jindal Solar Power Solution Pvt. Ltd., (Mrs. Vikas Jindal)	2000	4.38
3	M/s Jindal Akshay Urja Pvt. Ltd., (Mrs. Vinay Kumar Jindal)	3000	4.38
4	M/s G.S. Renewable Energy Solution Pvt. Ltd., (Mrs. Gauri Shankar Agarwal)	2000	4.38

Sl. No.	Name of Generator	Capacity (kWp)	Tariff (Rs. kWh)
5	M/s Jindal Greentek Energy Solutions Pvt. Ltd., (Mrs. Anshual Jindal)	3000	4.13
6	M/s OSD Solar Pvt. Ltd., (Mrs. Narayan Singh)	2000	4.49

However, while examining the details of documents submitted by UPCL, it has been observed that UERDA has allotted the project to Solar Generators as mentioned above at Sl. No. 4, 5 & 6 at the tariff of Rs. 4.49 per kWh, Rs. 4.38 per kWh & Rs. 4.13 per kWh respectively. Therefore, UPCL is required to clarify regarding the difference in Tariff as mentioned above.

- With regard to the 'Calculation of Payback Period' sheet, UPCL is required to clarify the rationale for considering total project capacity of 10 MW at Column No. 'B', addition of 'D' in formula proposed at Column No. 'H', consideration of tariff of all projects as Rs. 4.37/kWh and consideration of loss of 15% at Column No. "D".

(D) 33/11 kV S/s Nakot (2 X 3 MVA)

- With regard to 2x3 MVA, 33/11 kV S/s Nakot, Tehri(G) and its associated 10 km line, UPCL is required to furnish the reasons for bringing a Petition of post facto approval before the Commission when in past the Commission has categorically issued directions w.r.t. seeking prior investment approval for the capital works exceeding Rs. 2.50 Crore. Further, UPCL is required to furnish the names of the officers responsible for the aforesaid laxity.
- UPCL is required to furnish the 11 kV feeder and transformer-wise maximum current loading details of 2x3 MVA, 33/11 kV S/s Nakot, Tehri (G). Further, UPCL is required to furnish colored photograph of substation indicating incoming gantry/ feeder, outgoing feeders, Transformers and Control Room.
- It is observed that the 'item rate BOQ of supply of material for construction of 33 kV (2x5 km) LILO line' do not indicate the details of 30 kms (10 kms per phase) ACSR DOG Conductor used for the said LILO line. Further, the BOQ indicates 0.5 km ACSR weasel conductor. UPCL is required to clarify in this regard.
- UPCL is required to furnish a copy of RESPO manuals/UPCL's drawing referred in execution of the project.
- UPCL is required to clarify regarding cost of 3 MVA transformers as the same is not reflected in the BOQ. Further, UPCL is required to clarify that how the project is a turnkey project when important elements like transformers and ACSR DOG Conductor have not been specifically indicated in the BOQ itself."
- In response to this, UPCL submitted its reply vide letter dated 31.10.2022 furnishing its point-wise reply to the deficiencies/infirmities/additional information as mentioned below:-

"A. General

- Funding of all the projects shall be 70% as a loan from financial institution and 30% as a Government equity .

2. Calculation have re-checked and appears to be correct. Also it is to mention that calculation of payback period is based on cash flow not on the profit and the calculation of interest includes 'Interest on loan' as well as 'Interest on working capital.
3. According to primary survey, 02 km line out of total 5.2 km line proposed for construction for power evacuation from the SPV generating plant at Village-Duguda (mentioned at Sl. No. 01 of the Petition) is suppose to be passed through forest area.

As per the prevailing practice, case for permission from concern department is to be prepared by the contractor after conducting the detailed survey. However, the required fee for the same shall be borne by UPCL on actual basis. Expected expenditure towards forest clearance has been taken in estimate as Rs. 25 Lakh.

As per preliminary survey, no clearance from forest department is expected to be taken for the construction of line for power evacuation from the SPV generating plant at village Patlibagad (mentioned at Sl. No. 02 of the Petition).

4. For framing the estimates for the projects mentioned at Sl. No. 01 and 02 of the Petition, per unit rate for the centralized material has been taken from the Weighted Average Rates for the month of May'2021 and January'2022 respectively, however, for the de-centralized material and labour part the local prevailing rates have been taken. The Weighted Average Rates for the month of May'2021, January'2022 and Stock Issue Rate of FY 2019-20 is annexed as Annexure-A, B & C respectively.
5. The cost of construction of lines from SPV generating station to switching station including cost of switching station is being borne by developers, thus the ownership of the infrastructure from generating station to switching station including cost of switching station will be with the developers.

Further, as per Clause No. 6 (4), 15 (c) and 41 (3) individual generating company has to opt to construct the evacuation infrastructure or he may also get the work carried out by distribution licensee. Therefore, as per decision taken during the finalization of TFR, UPCL has to construct the power evacuation line beyond the switching station and upto HV/EHV Substation.

6. Land has already been acquired for construction of 33/11 kV Substation Nakot copy of registry of land is annexed as Annexure-D. The work of construction of 33/11 kV S/s Nakot has already completed and substation is functioning. Acquisition of land is not required for the projects mentioned at Sl. No. 01 and 02 of the Petition.
7. Initially 10 No. of developers having cumulative installed capacity more than 25 MW have applied with UPCL. Developers had opted not to construct the evacuation infrastructure beyond switching station. Therefore, as per provision of aforesaid regulation UPCL has prepared the proposal/estimate to construct the power evacuation infrastructure from switching station to 132/33 kV S/s Syalidhar. As the cumulative installed capacity of 10 No. developers was more than 25 MW therefore, provision has been made to evacuate the power to nearest 132/33 kV S/s of Transmission Licensee. Till date 04 out of 10 No. developers i.e. Shri. Suresh Kumar, Smt. Renu Agarwal, Shri. Sudanshu Jindal and Shri. Sudhir Kumar Rastogi have not turned up to install the plant.

8. Work for construction of infrastructure for evacuation of power is proposed to be implemented on turnkey basis. However, the 33/11 kV S/s Nakot, Tehri (G) has been awarded on partial turnkey basis as 3 MVA 33/11 kV Power Transformers has been provided by UPCL and rest of the material has been supplied by contractor himself.

B. 33 kV line from Dhankal & Duguda, Ranikhet (Almora) to 132/33 kV S/s Naini (Ranikhet) & 33 kV Bay at Naini

1. A joint inspection has been carried out by team of officers of UPCL and PTCUL and found that 01 No. 33 kV bay is available at 132/33 kV S/s Naini. PTCUL has provided its consent to use the bay for evacuation of power generated by Solar Power Plants.
2. The detailed cost estimate for the proposed work is annexed as Annexure-E.
3. Technical Feasibility have been issued to 03 developers having cumulative proposed capacity of 10 MW. Before it UPCL has already issued the Technical Feasibility M/s Sunlayer Energy Pvt. Ltd., having capacity of 10 MW to evacuate power at 33/11 kV S/s Bagwalipokhar.

For evacuation of power from these 04 SPV plants, 33/11 kV S/s Bagwalipokhar having capacity of 2x3 MVA and 33 kV line emanating from 132/33 kV S/s Naini to 33/11 kV S/s Bagwalipokhar constructed on DOG conductor are not technically able to evacuate the 20 MW power. If the line was proposed to connect the 33/11 kV S/s Bagwalipokhar, then the conductor from Bagwalipokhar to 132/33 kV S/s Naini (approx. 10 km) would have to upgrade. Therefore, in view of the high cost involve in construction of line from switching station to 132/33 kV S/s Naini via. 33/11 kV S/s Bagwalipokhar, the power evacuation was proposed at 132/33 kV S/s Naini with provision of 33 kV Bay at Naini.

4. In the calculation of payback period 'D' is not considered while calculating the annual profit of the project but it is typed in heading column by error. The revised sheet is annexed as Annexure-F.
5. The tariff as per LoA issued by UERDA for purchase of power from generator is M/s Rastogi Green Tech Energy Pvt. Ltd., is Rs. 4.37/kWh, M/s DS Smart Energy Pvt. Ltd., is Rs. 4.37/kWh. and M/s Suman Gupta Green Energy Pvt. Ltd., is Rs. 4.49/kWh. The revised calculation for payback period is annexed as Annexure-F.

Additional Submission of UPCL

It is requested to allow the exclusion of Rs. 70.00 Lakh from the project mentioned at sl. No. 01 of the Petition. Revised cost of project will be Rs. 209.85 Lakh. The revised the calculation of Pay Back Period and cost breakup is annexed as Annexure-F & G.

C. 33 kV line from Patlibagad (Almora) to 132/33 kV Substation Syalidhar (Almora) & 33 kV Bay at Syalidhar:

1. A joint inspection has been carried out by team of officers of UPCL and PTCUL and found that 01 No. 33 kV bay is available at 132/33 kV S/s Syalidhar. PTCUL has provided its consent to use the bay for evacuation of power generated by Solar Power Plants.

Additional Submission of UPCL

It is requested to allow to exclude Rs. 70.00 Lakh from the project mentioned at Sl. No. 02 of the Petition. Revised cost of project will be Rs. 481.79 Lakh. The revised cost breakup and the calculation of Pay Back Period is annexed as Annexure-H & I.

2. The detailed cost estimate for the work proposed in the Petition is annexed ...
3. The Tariff for the plants have been typed by error, the revised detail of 6 Nos. solar generators is as per following table:

Sl. No.	Name of Generator	Capacity (kWp)	Tariff (Rs. kWh)
1	M/s Bindal Solar Energy Pvt. Ltd., (Mrs. Isha Agarwal)	3000	4.38
2	M/s Jindal Solar Power Solution Pvt. Ltd., (Mrs. Vikas Jindal)	2000	4.38
3	M/s Jindal Akshay Urja Pvt. Ltd., (Mrs. Vinay Kumar Jindal)	3000	4.38
4	M/s G.S. Renewable Energy Solution Pvt. Ltd., (Mrs. Gauri Shankar Agarwal)	2000	4.49
5	M/s Jindal Greentek Energy Solutions Pvt. Ltd., (Mrs. Anshual Jindal)	3000	4.38
6	M/s OSD Solar Pvt. Ltd., (Mrs. Narayan Singh)	2000	4.13

4. In the 'Calculation of Payback Period' sheet, the total project capacity has been taken as 15 MW. However, at Column No. 'B' total capacity of plant has been wrongly mentioned as 10 MW.

In the calculation of payback period 'D' is not considered while calculating the annual profit of the project but it is typed in column by error.

The payback period has been recalculated on tariff of individual developer.

AT&C Loss of UPCL for FY 2021-22 is 15.75% and the same has been taken on account for calculation for revenue generator by the plant(s).

The corrected/revised sheets is annexed as Annexure-I

D. 33/11 kV Substation Nakot (2x3 MVA):

1. To improve the voltage profile of area under 11 kV Chamba-Nakot feeder and 11 kV Gaja-Nakot feeder emanating 33/11 kV Substation Chamba and 33/11 kV Substation Gaja respectively, a substation was urgently required. Therefore keeping it in view, proposal has been prepared and work has been awarded on partial turkey basis.

It is also to mentioned here that proposal for approval from Board of Directors (BoD) was put up to the committee formed by the BoD but could't discussed. After that due to COVID-19 pandemic in the March'2020 it could't put before the committee.

Further, it is to inform that in anticipation of BoD approval a Petition has sent to Hon'ble Commission in the month of Feb'2021 but in absence of BoD resolution the Petition was returned. Not obtaining the prior permission from the commission was not intention but it was circumstances.

2. The photograph of substation indicating incoming gantry/feeder, outgoing feeders, Transformers and Control Room is annexed as Annexure-K.

3. *Supply of ACSR DOG Conductor was in scope of the contractor itself and its cost is mentioned at Sl. No.4 of Item Rate BoQ for "Supply of material" of the agreement respectively. Also, supply of 0.5 km ACSR weasel conductor as mentioned at Sl. No. 29 of Item Rate BoQ "Supply of material" was in the scope of the contractor but it has not been used in the project (Copy of "Item Rate BoQ" for both the work is annexed as Annexure-L)*
4. *The scan copy of RESSPO manual along with the drawing is annexed as Annexure-M.*
5. *Work has been implemented on partial turnkey basis as 02 No., 3MVA, 33/11 kV Power Transformers, having cost of Rs. 27,65,880.00 each, has been supplied/issued to work by UPCL and cost involved in Erection/Labour is part of agreement and mentioned at Sl. No. 2 of Item Rate BOQ for "Erection/Labour of material."*

Supply and erection of ACSR DOG Conductor were in scope of the contractor itself and their supply and erection cost is mentioned at Sl. No.4 of Item Rate BoQ for "Supply of material" and Sl. No. 20 of Item Rate BoQ for "Erection/Labour of material." of the agreement respectively (Copy of "Item Rate BoQ" for both the work and invoice of power transformer is annexed as Annexure-L & N).

Additional Submission of UPCL

It is requested to allow the addition of Rs. 55,31,760.00 as the issued cost of 02 Transformers having cost of Rs. 27,65,880.00 each (Invoice issued from store of UPCL is annexed as Annexure-R)."

7. On examination of the aforesaid submissions of the Petitioner, the Commission had further found certain data gaps/infirmities. In order to get clarity on submission of the Petitioner, a meeting with the UPCL's officers was held on 02.12.2022. UPCL's officers explained its point-wise reply as furnished in its submission dated 31.10.2022. Further, during the discussion certain new facts of the proposed project came to light and therefore, accordingly the Commission vide its e-mail dated 02.12.2022 sought additional information as mentioned below:-

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1. *With regard to reply at Point No. A (2), UPCL is required to submit the excel sheet of the revised payback period calculation for project 1 & project 2 as per discussion during the meeting w.r.t. depreciation.*
2. *With regard to Point No. A (5), UPCL is required to clarify how the Regulation No. 15 (c) of UERC RE, Regulations, 2018 is applicable in the instant matter when no provision of partial construction of power evacuation line/switching Substation is provided. Further, UPCL is required to submit the details of interconnection point, losses and O&M of assets between the generator and the switching station.*
3. *With regard to Point No. A (7), UPCL is required to submit the desired details for project No. 1 of its Petition.*
4. *With regard to Point No. B (1) & C (1), UPCL is required to submit the copy of joint inspection report.*

5. With regard to Point No. B (3), UPCL is required to submit the technical feasibility report for the project along with SLD and load flow for the 132 kV S/s Naini, 33/11 kV S/s Bagwalipokhar & other S/s in close vicinity. Further, UPCL is also required to submit the status of Solar Project of M/s Sunlayer Energy Pvt. Ltd. and justification for not proposing the connectivity at 33/11 kV S/s Bagwalipokhar.
6. With regard to Point No. D (2), UPCL is required to furnish the 11 kV feeder and transformer-wise maximum current loading details of 2x3 MVA, 33/11 kV S/s Nakot, Tehri.

The reply on the aforesaid points is to be furnished before the Commission at the earliest."

8. Further, a discussion in the matter was held with SE (Commercial), UPCL and EE (Project), accordingly, an e-mail dated 21.12.2022 was sent to UPCL for furnishing information as mentioned below:-

"UPCL is required to furnish information of the Solar Generators with capacity above 500 kW as per format mentioned below. Further, UPCL is required to clarify regarding the various prevailing mechanisms for recovery of charges for construction of power evacuation line including switching station by the developer..."

9. In response to this, UPCL has submitted its reply vide letter dated 12.01.2023 furnishing its point-wise reply to the deficiencies/infirmities/additional information as mentioned below:-

"

1. The revised calculation of "Pay Back Period" as per discussion is enclosed **as Annexure-A**.
2. Further, as per Clause No. 6(4), 15(c) and 41(3) of the RE regulation construction of the evacuation infrastructure has to be opted by the individual developer. The developers opted to construct the infrastructure upto switching station. Beyond the switching station upto HV/EHV sub-station infrastructure will be developed by UPCL. Therefore, accordingly proposal has been prepared.

RE regulation is silent on applicability of normative levelised tariff of Rs. 0.12/unit over and above the generic tariff in case of partial construction of evacuation infrastructure. However, at present power is being evacuated on ad-interim arrangement and normative levelized tariff is not being paid to generator.

"Inter-connection Point" in respect of all the RE based generating stations, except Grid interactive Roof Top & Small Solar PV Power Projects, shall mean interface point of line isolator on outgoing feeder on HV side of generator transformer...

3. **Project No. 1 (Dugguda):**

Initially, TFR has been issued to 04 No. developers having proposed generation capacity of 20000 kWp. The current status of these Solar Power Plant is as follows:

S. No.	Name of Generator	Capacity (kWp)	Current Status of construction of Solar Plant
1	M/s Rastogi Green Energy Pvt. Ltd.	2000	Completed and energized.
2	M/s D.S. Smart Energy Pvt. Ltd	4000	
3	M/s Suman Gupta Green Energy Pvt. Ltd.	4000	
4	M/s Sunlayer Energy Pvt. Ltd.	2x5000	Plant has been shifted to another location
Total		20000	

1. The Solar Power Plant mentioned at Sl. No. 1, 2 and 3 of above table has been completed and generated power is being evacuated on ad-interim arrangement.
2. The switching station at Duguda has been constructed and being maintained by the generators themselves.
3. The line between switching station and generating plant of M/s D.S. Smart has been constructed and being maintained by the generator.
4. The line between switching station and generating plant of M/s Rastogi Green has been constructed and being maintained by the generator.
5. The line between switching station and generating plant of M/s Suman Gupta has been constructed and being maintained by the UPCL.
6. To avoid bottling up of generation, a LILO connection as an ad-interim arrangement has been constructed and maintained by UPCL at 33 kV line emanating from 132/33 kV S/s Naini and feeding 33/11 kV S/s Bagwalipokhar by UPCL, which will facilitate the evacuation from said generators till the evacuation from proposed line starts.
7. Developer of Solar Power Plant mentioned at Sl. No. 4 of above table has change the location of plant. 5000 kWp has been installed at Tahadgaon, Syalde (Almora) however, 5000 kWp has been proposed to be shifted at Lamgara (Almora).
8. The existing 33 kV line from 132 kV S/s Naini and 33/11 kV S/s Bagwalipokhar passes through forest & hilly region, such geographical condition are impediment to quick restoration of line during breakdown. The LILO line will serve the purpose of N-1 Contingency in evacuation of 10 MW power and thus reduce the burden of deemed generation on UPCL.
9. The block diagram of existing/proposed line including nearby substations as provided by Electricity Distribution Division, Ranikhet is enclosed **as Annexure-B**.

Project No. 2 (Syolidhar):

Initially, TFR has been issued to 10 No. developers having proposed generation capacity of 25700 kWp. The current status of these Solar Power Plant is as follows:

S. No.	Name of Generator	Capacity (kWp)	Current Status of construction of Solar Plant
1	M/s Bindal Solar Energy Pvt. Ltd., (Mrs. Isha Agarwal)	3000	Construction of Solar Power

S. No.	Name of Generator	Capacity (kWp)	Current Status of construction of Solar Plant
2	M/s Jindal Solar Power Solution Pvt. Ltd., (Mr. Vikas Jindal)	2000	Plant has been completed.
3	M/s Jindal Akshay Urja Pvt. Ltd., (Mr. Vinay Kumar Jindal)	3000	
4	M/s G.S. Renewable Energy Solution Pvt. Ltd., (Mr. Gauri Shankar Agarwal)	2000	
5	M/s Jindal Greentek Energy Solutions Pvt. Ltd., (Mr. Anshul Jindal)	3000	
6	M/s OSD Solar Pvt. Ltd., (Mr. Narayan Singh) (Plant withdrawn by Smt. Renu Agarwal (2000 kWp) & allotted to M/s OSD Solar Pvt. Ltd., by UREDA.)	2000	
7	Shri. Suresh Kumar	2000	Plants has been shifted to another location.
8	Shri. Sudhir Kumar Rastogi	4000	
9	M/s Bindal Lasar Home Pvt. Ltd.,	2700	
10	Shri. Sudanshu Jindal	2000	Not available
Total		25700	

- The Solar Power Plant mentioned at Sl. No. 1 to 6 of above table has been completed and to avoid bottling up of generated power a tapping arrangement on 33 kV line passing has been done as ad-interim arrangement till the evacuation starts through proposed line. The said ad-interim arrangement has been created and is being owned & maintained by UPCL for all the six plants.
- The line between generation point and switching station including switching station at Patlibagad is being constructed/will be owned & maintained by the generators themselves.
- The proposed line for evacuation of power from switching station to 132/33 kV S/s Syalidhar will be constructed, owned & maintained by UPCL.
- Developers of Solar Power Plants mentioned at Sl. No. 7 to 9 of above table have change the location of the plants. However, current status of installation of Solar Power Plant mentioned at Sl. No. 10 is not available with UPCL.
- The block diagram of existing/proposed line including nearby substations as provided by Electricity Distribution Division, Almora **is enclosed as Annexure-C**.
- A joint inspection has been carried out by team of officers of UPCL and PTCUL on dated: 21-10-2022 at 132/33 kV S/s Naini & at 132/33 kV S/s Almora and found that 01 No. 33 kV bay is available at both 132/33 kV S/s Naini and Almora no joint survey report has been prepared however, PTCUL & UPCL mutually agree to use the existing bays at 132/33 kV S/s Naini and 132/33 kV S/s Almora for evacuation of power generated by Solar Power Plants.
- The SLD and load flow for the 132/33 kV S/s Naini, 33/11 KV S/s Bagwalipokhar & other S/s in close vicinity along with technical feasibility report for the project as

provided by Electricity Distribution Division, Ranikhet is **enclosed as Annexure-B&D**.

M/s Sunlayer Energy Pvt. Ltd., has changed the location of its plant and shifted to another District.

The minimum demand at 33/11 KV S/s Bagwalipokhar is approx. 12 amp. & the generation is 36.99 amp. approx. whereas at 33/11 KV S/s Dwarahat minimum demand is approx. 25 amp. & the generation is 21 amp. approx. The generation is at its peak during day time whereas the peak load demand hrs are at morning and evening.

Therefore, there is possibility that the power will flow toward 132/33 kV S/s Naini during peak generation. Also, as the existing 33 kV line from 132/33 kV S/s Naini and 33/11 kV S/s Bagwalipokhar passes through forest & hilly region, therefore due to geographical condition its being difficult to quickly restore the line during breakdown.

In view of increase in upcoming solar projects in the area, difficulty in timely restoration of supply in case of breakdown due to adverse geographical conditions a dedicated feeder from generator switching station to 132/33 kV S/s Naini has been proposed for evacuation. This will result in lesser burden of deemed generation & give room to other upcoming smaller generation plants to evacuate at their nearest 33/ 11 kV Substation

The LILO line will serve the purpose of N-1 Contingency in evacuation of 10 MW power and thus reduce the burden of deemed generation on UPCL.

6. Electricity Distribution Division, Tehri has informed that the work of construction of outgoing 11 kV feeders from newly constructed 33/11 kV S/s Nakot has been awarded. Out of these 02 No. 11 kV feeder has been completed and energized. However, work of construction of balance outgoing 11 kV feeders is under progress. Transformer-wise/ feeder-wise current loading of the substation is as follows:

33/11 kV Transformer-1	-	1.5 amp. (max.)
Incommer-I	-	5 amp.
11 kV Feeder-1	-	4.5 amp.
33/11 kV Transformer-2	-	1.5 amp.
Incommer-II	-	5 amp.
11 kV Feeder-2	-	5.0 amp.

7. The details of Solar Generators with capacity above 500 kW as per format e-mailed on dated 21-12-2022 is enclosed..."

10. The Commission vide its letter dated 02.02.2023 directed UPCL to furnish information on following points latest by 10.02.2023:

"

- (1) In reference to your reply dated 12.01.2023 in the matter of 'Application seeking approval for the investment on the project of Construction of 02 no. 33 kV line for Power Evacuation from Solar Power Plants and 01 no. 33/11 kV S/s along with its associated 33 kV line', vide which with regard to the clarification pertaining to Regulation 15 (c) of UERC (RE) Regulations, 2018 you

have submitted that "...at present power is being evacuated on ad-interim arrangement and normative levelized Tariff is not being paid to generator."

Further, with regard to proposed project at Duguda in your reply dated 12.01.2023 you have furnished that "5. The line between switching station and generating plant of M/s Suman Gupta has been constructed and being maintained by the UPCL."

On examining the instant matters in detail following cases have been observed:-

- 1. Where line(s) and switching/pooling station have been constructed by the Solar Generator(s) and further line from switching/pooling station upto the nearest substation is being constructed by UPCL.*
- 2. Where line from Solar power plant upto switching/pooling station has been constructed by UPCL and further line from switching/pooling station upto the nearest substation is being constructed by UPCL but switching/pooling station has been constructed by Solar Generator(s).*

In this regard, you are required to confirm whether Provision of Rs. 0.12/unit would be applicable in the instant matters

Or

Any other methodology for sharing the cost of line as well as of switching station between Solar Generator(s) and UPCL under the ambit of prevailing Regulations is agreed upon or has been adopted.

UPCL is required to furnish explicit reply for the above-mentioned cases.

(2) UPCL is required to furnish information of the Solar Generators with capacity 100 kW and above upto 500 kW as per format..."

- 11. UPCL vide its letter dated 13.02.2023 & 29.04.2023 requested the Commission to allow time extension for furnishing the desired information in the matter. The Commission vide its letter dated 17.05.2023 allowed last and final opportunity for furnishing the desired information latest by 30.05.2023.*
- 12. In compliance to the Commission's letter dated 17.05.2023, UPCL vide its letter dated 26.05.2023 submitted the details of Solar generators with installed capacity 100 kW and above upto 500 kW for total 135 Nos. solar generators.*

Commission's Observations, Views & Directions:-

13. On examination of the Petition and subsequent submissions of the Petitioner, following have been observed:-

33 kV line from Duguda, Ranikhet (Almora) to 132/33 kV S/s Naini (Ranikhet):-

- (1) UPCL has proposed the construction of 5.2 km 33 kV line for evacuation of 10 MW power generated by 3 Nos. Solar Power Plants from switching station Duguda (Ranikhet) to 132/33 kV S/s Naini (Ranikhet) and 01 No. 33 kV Bay at 132/33 kV S/s Naini. However, during the examination of the instant Petition, the Commission has found that the supplementary agreement was signed with the 02 Nos. of Solar Generators for evacuation of power with existing 33 kV line connecting 132 kV S/s Naini and 33/11 kV S/s Bagwalipokhar and therefore, the Commission vide its letter dated 13.10.2022 had sought certain clarification on the same.
- (2) The Petitioner vide its submission dated 31.10.2022 has submitted that prior to the issuance of technical feasibility to 03 Nos. of Solar Generators having cumulative proposed capacity 10 MW, the Petitioner had issued a technical feasibility to M/s Sunlayer Energy Pvt. Ltd. having capacity 10 MW to evacuate power at 33/11 kV S/s Bagwalipokhar and informed that 33 kV line emanating from 132/33 kV S/s Naini to 33/11 kV S/s Bagwalipokhar was constructed on DOG conductor and therefore power evacuation from these 04 Solar Power Projects (cumulative capacity 20 MW) would not be technically feasible. Thus, instead of upgrading the existing DOG conductor which otherwise would result in high cost investment, the power evacuation of 03 SPV plants has been proposed at 132/33 kV S/s Naini with provision of 33 kV Bay at Naini.
- (3) On examination of aforesaid submission, the Commission has further sought the technical feasibility report, current status of solar project of M/s Sunlayer Energy Pvt. Ltd. and also sought reasons for applicability of Regulation No. 15 (c) of UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2018 in the instant matter vide its e-mail dated 02.12.2022. The Petitioner in its submission dated 12.01.2023 has submitted that the aforesaid Solar Power Plants have been commissioned and the power is being evacuated to 33/11 kV

S/s Bagwalipokhar. Further, the Petitioner has informed that M/s Sunlayer Energy Pvt. Ltd. has changed location of its plant and shifted to another district.

- (4) **The Commission has observed that the Petitioner has not submitted the true facts of the projects as the same came to light only when the Commission raised the deficiencies/infirmities on the instant Petition and subsequent submissions made by the Petitioner. The Petitioner has attempted to conceal the facts and proposed the investment on the construction of the assets which *prima-facie* do not substantiate the need for the projects. The Commission cautions the Petitioner to ensure submission of true picture of the proposed projects before the Commission while seeking any investment approval in future otherwise, appropriate action may be initiated against the Petitioner in accordance with the Act/Rules/Regulations.**
- (5) It is always appropriate to consume the generated power at the nearby loads to improve the voltage profile and avoid the technical losses. The generation of 10 MW solar power by 03 Nos. Solar Power Plants should be supplied to the nearby loads i.e. at 2x3 MVA capacity 33/11 kV S/s Bagwalipokhar which is further connected with the 2x3 MVA capacity 33/11 kV S/s Dwaraghat. Any excess generation beyond the consumption of the aforesaid Substations would be evacuated to 132/33 kV S/s Naini through existing 33 kV DOG conductor. Prima-facie, the need of construction of 33 kV evacuation line from the Duguda switching station to 132/33 kV S/s Naini is not apparent. However, from 'N-1' contingency aspect the proposed line has some substance.
- (6) Further, initially the Petitioner in its instant Petition has sought the construction of 33 kV outgoing Bay at 132/33 kV S/s Naini for evacuation of power from 03 Nos. Solar Power Plants which falls under the ambit of PTCUL. With regard to the deficiency raised by the Commission on the same vide its letter dated 13.10.2022, the Petitioner vide its submission dated 31.10.2022 and 12.01.2023 has submitted that a team of officers of UPCL and PTCUL during a joint inspection held on 28.10.2022 found that 01 No. 33 kV Bay is available at 132/33 kV S/s Naini. Further, with regard to cost of 01 No. 33 kV Bay, the Petitioner in its submission dated 31.10.2022 has requested to allow the exclusion of Rs. 70 Lakh from the project cost and submitted the revised cost of the project as **Rs.**

209.85 Lakh. Thus, the revised cost of the project is less than the threshold limit of Rs. 2.50 Crore for seeking prior investment approval.

Further, the Commission has also observed that the Petitioner before filing the Petition has not conducted the feasibility study of the site and proposed the investment for construction of 01 No. 33 kV Bay at 132/33 kV S/s Naini which is not required as a spare 33 kV Bay is already existing at the 132/33 kV S/s Naini. This portrays the lackadaisical approach of the Petitioner towards its responsibilities and thus the Commission accordingly cautions the Petitioner to refrain from the same and advises to carry-out a due-diligence/feasibility study at ground level prior to proposing investment approval before the Commission.

- (7) The Petitioner in its submission dated 12.01.2023 has submitted that the Solar power plants of cumulative capacity 10 MW has been completed and generated power is being evacuated through ad-interim arrangement. Further, the Petitioner has submitted that switching station has been constructed and being maintained by the Solar generators themselves. Furthermore, the Petitioner has submitted that the lines between switching station and Solar power plants of generators namely M/s DS Smart & M/s Rastogi Green respectively have been constructed & maintained by the respective generators themselves whereas, the line between switching station and Solar power plant of generator namely M/s Suman Gupta has been constructed & maintained by the Petitioner. The Commission has observed that in the instant matter consistency is not maintained w.r.t. the responsibility of constructing and maintaining line from Solar generator upto the switching station. The Regulation 41(3) of UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2018 provides the options to Solar Generators for either to construct the evacuation system upto the nearest substation of Transmission/Distribution Licensee on his own or may also get the work of construction of the power evacuation system by the Transmission/Distribution Licensee. Therefore, the Commission is of the view that a consistent approach should be maintained in all the cases i.e. with or without switching station and responsibility of construction and maintenance of line from Solar generator upto switching station including switching station

and further line upto the nearest 132/33 kV Substation should be clearly set amongst the Solar developers/Petitioner as the case may be in accordance with the relevant Regulations.

The Regulation 41 of UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2018 do not specifically calls for provision of switching station for a cumulative Solar generators capacity of less than 25 MW. However, citing the need and better utilization of resources the Commission is of the opinion that provision of switching station may also be extended for cumulative capacity of less than 25 MW also.

Thus, exercising its powers under the provisions of Regulation 52 'Power to Relax' of UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2018 which specifies that "*The Commission, for reasons to be recorded in writing, may vary any of the provisions of these regulations on its own motion or an application made before it by an interested person*", the Commission in the instant matter allows the provision of switching/pooling station for the Solar Generators with cumulative capacity of less than 25 MW for the purpose of power evacuation.

- (8) With regard to the Petitioner's reply dated 12.01.2023 "*...RE regulation is silent on applicability of normative levelized tariff of Rs 0.12/unit over and above the generic tariff in case of partial construction of evacuation infrastructure*", the Commission is of the view that the Petitioner's interpretation that the Regulation is silent on applicability of normative levelized tariff Rs 0.12/unit over and above the generic tariff in case of partial construction of evacuation infrastructure is grossly incorrect as the Regulation 41 (3) of UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2018 provides that "*...In case RE based Generating Stations exercise the option to construct the evacuation system including the line upto the nearest substation of Transmission/Distribution licensee, the required bay, terminal equipment, associated synchronization equipment and above pooling switching station, if any, etc. The cost of such evacuation system shall be borne by such generating stations.*"

From the above, it is amply clear that the onus of creating the entire power evacuation system including line, Bay, terminal equipment, associated synchronization equipment, switching station etc. is with the RE generator/Distribution licensee as the case may be as opted by the RE generator and no provision of partial construction of power evacuation system has been provided in UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2018.

33 kV line from Patlibagad (Almora) to 132/33 kV S/s Syalidhar (Almora):-

- (1) UPCL has proposed the construction of 13.56 km 33 kV line for evacuation of 15 MW power generated by 6 Nos. Solar Power Plants from switching station at Patlibagad to 132/33 kV S/s Syalidhar (Almora) and 01 No. 33 kV Bay at 132/33 kV S/s Syalidhar (Almora).
- (2) The Petitioner vide its submission dated 31.10.2022 has submitted that 06 Nos. of Solar Generators having cumulative proposed capacity 15 MW shall be evacuating their power through the proposed line and has accepted typographical error at its end w.r.t. Tariff.
- (3) With regard to evacuation of power through interim arrangement, the Commission is of the strong view that the Petitioner has not submitted the true facts of the projects as the same came to light only when the Commission raised the deficiencies/infirmities on the instant Petition and subsequent submissions made by the Petitioner which is explicit concealment of the facts. The Commission cautions the Petitioner to submit the true picture of the project before the Commission for seeking any investment approval in future otherwise, appropriate action may be initiated against the Petitioner in accordance with the Act/Rules/Regulations.
- (4) It is always appropriate to consume the generated power at the nearby loads in order to improve the voltage profile and avoid the technical losses. The generated 15 MW solar power by 06 Nos. Solar Power Plants should be supplied to the nearby loads.
- (5) Initially, the Petitioner in its instant Petition had sought the construction of 33 kV outgoing Bay at 132/33 kV S/s Syalidhar (Almora) for evacuation of power

from 06 Nos. Solar Power Plants which falls under the ambit of PTCUL. With regard to the deficiency raised by the Commission on the same vide its letter dated 13.10.2022, the Petitioner vide its submission dated 31.10.2022 and 12.01.2023 has submitted that a team of officers of UPCL and PTCUL during a joint inspection held on 28.10.2022 has found that 01 No. 33 kV Bay is available at 132/33 kV S/s Syalidhar (Almora). **The Commission is of the view that the Petitioner before filing the Petition has not conducted the feasibility study of the site and has proposed the investment for construction of 01 No. 33 kV Bay at 132/33 kV S/s Syalidhar (Almora) which is not required as already a spare 33 kV Bay is existing at the 132/33 kV S/s Syalidhar (Almora). This portrays the lackadaisical approach of the Petitioner towards its responsibilities and thus, the Commission accordingly cautions the Petitioner to refrain from the same and advises to carry-out a due-diligence/feasibility study at ground level prior to proposing investment approval before the Commission.**

Further, with regard to cost of 01 No. 33 kV Bay, the Petitioner in its submission dated 31.10.2022 has requested to allow the exclusion of Rs. 70 Lakh from the project cost and submitted the revised cost of the project as **Rs. 481.79 Lakh.**

- (6) The Petitioner in its submission dated 12.01.2023 has submitted that initially Technical Feasibility Report (TFR) was issued considering ten Solar developers however, three of them were shifted to another location and one developer was not available. Thus, 06 Nos. developers having cumulative installed capacity of 15 MW would be evacuating their power through the proposed 13.56 km 33 kV line. Further, the Petitioner has submitted that the line between generation point and switching station including switching station at Patlibagad is being constructed/will be owned and maintained by generators themselves and the proposed line for power evacuation from switching station to 132/33 kV Substation Syalidhar will be constructed, owned and maintained by the Petitioner. The Regulation 41(3) of UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2018 provides the options to Solar Generators for either to construct the evacuation system upto the nearest substation of Transmission/Distribution Licensee on his own or may also get the work of construction of the power evacuation system by the Transmission/Distribution

Licensee. Therefore, the Commission is of the view that a consistent approach should be maintained in all the cases i.e. with or without switching station and responsibility of construction and maintenance of line from Solar generator upto switching station including switching station and further line upto the nearest 132/33 kV Sub-station should be clearly set amongst the Solar developers/Petitioner as the case may be in accordance with the relevant Regulations.

The Regulation 41 of UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2018 do not specifically calls for provision of switching station for a cumulative Solar generators capacity of less than 25 MW. However, citing the need and better utilization of resources, the Commission is of the opinion that provision of switching station may also be extended for cumulative capacity of less than 25 MW also.

Thus, exercising its powers under the provisions of Regulation 52 'Power to Relax' of UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2018 which provides that "*The Commission, for reasons to be recorded in writing, may vary any of the provisions of these regulations on its own motion or an application made before it by an interested person*", the Commission in the instant matter allows the provision of switching/pooling station for the Solar Generators with cumulative capacity of less than 25 MW for the purpose of power evacuation.

- (7) The Petitioner in its submission dated 12.01.2023 has submitted that 06 Nos. Solar Power Plants have been completed and to avoid bottling up of generation a tapping arrangement on 33 kV line emanating from 132/33 kV S/s Syalidhar, Almora to 33/11 kV S/s Someshwar has been done. The Commission is of the view that direct tapping on 33 kV line for evacuation of power from the said 06 Nos. Solar Power Plants is not appropriate from protection and safety perspective and availability of circuit breaker for better relay co-ordination/protection would be essential and thus it calls for creation of a switching/pooling station with appropriate circuit breakers. In the instant case, the Commission agrees with the objective of creating a switching/pooling

station for the said 06 Nos. Solar Power Plants as the same would help in optimum utilization of resources.

Further, taking an independent 33 kV line from switching/pooling station at Patlibagad to 132/33 kV S/s Syalidhar as proposed by the Petitioner appears to be appropriate.

33/11 kV S/s Nakot and its associated 33 kV LILO Line:-

- (1) The Petitioner in its Petition dated 27.09.2022 under relief sought has requested the Commission to grant post-facto approval on the project covering the construction of 1 No. new 33/11 kV S/s alongwith associated 33 kV line at Nakot, Tehri.
- (2) The Petitioner under justification for the 33/11 kV S/s Nakot has submitted that the power supply to Nakot region of Block Chamba was being fed through 140 km long 11 kV Nakot-Gaja feeder (including all branches) and 40 km long 11 kV Nakot Chamba (including all branches) emanating from 33/11 kV S/s Gaja and Chamba respectively. As these 11 kV feeders passed through forest area at several places, the problem of low voltage as well as delay in restoration of power supply in case of fault/break-down was common. As a result, power supply was affected due to regular interruption in power supply and low voltage problem.
- (3) The Petitioner under justification for the projects has submitted that after construction of 33/11 kV S/s Nakot the reliability and voltage profile of power supply in the area has improved and the consumers of the area would be able to avail 24X7 quality power supply.
- (4) On examination of the Petition/estimates, it was observed that UPCL had failed to include the cost of 3 MVA transformers in its Petition filed before the Commission and later when a specific query was raised in this regard, UPCL vide its submission dated 31.10.2022 made an additional submission and requested the Commission to allow the addition of Rs. 55.31 Lakh as the issued cost of 02 Nos. transformers which were issued to the contractor from stores of UPCL for installation at site.
- (5) In this regard, the Commission takes this matter seriously and is of the view that this act of Petitioner not only depicts its laxity on its part of preparing the

estimates but also depicts its indifferent approach towards safeguarding its commercial interests. The Commission is of the view that the distribution licensee should be particular in maintaining proper assets registers and records and should also ensure that the expenses incurred on assets are duly included in the estimates and later put forward for recovery in Tariff filings. In the instant matter, it is clear that a case of lack of proper accounting has been highlighted and the same came to light only when the Commission pointed out in its deficiencies. The Commission cautions the Petitioner to ensure safeguarding its commercial interests and not to repeat such mistakes in future proposals/Petitions before the Commission.

14. On examination of the submissions made by the Petitioner w.r.t. the Solar Generators upto 500 kW and above 500 kW getting the benefits of 12 paisa/unit for creating the required power evacuation infrastructure, following has been observed:

For Solar Generators upto 500 kW (100 kW and above upto 500 kW)

- (1) The Petitioner has furnished information of total 135 nos. Solar generators of capacity upto 500 kW with cumulative installed capacity of 39.4 MW.
- (2) In majority of the cases, the Petitioner has constructed the power evacuation infrastructure and in only few cases the developers have constructed the power evacuation infrastructure.
- (3) In majority of the cases, the power evacuation of Solar generation is via tapping arrangement from the existing distribution mains and in very few cases power evacuation system has been developed upto the substation.

For Solar Generators above 500 kW

- (1) The Petitioner has furnished information of total 36 nos. Solar generators of capacity above 500 kW with cumulative installed capacity of 210.53 MW.
- (2) In majority of the cases, the power evacuation of Solar generation is via dedicated line upto nearest sub-station.
- (3) In majority of the cases, the developers have constructed the power evacuation infrastructure and are availing the benefit of 12 paisa/unit. In few cases, the Petitioner has constructed the power evacuation infrastructure and no benefit of 12 paisa/unit is passed on to the solar generators in such cases.

15. From the observations mentioned at Para 14 above, the Commission has observed that solar generators with installed capacity above 500 kW are conspicuously availing the benefit of 12 paisa/unit in comparison to the solar generators with installed capacity less than 500 kW.
16. Based on the submissions made by the Petitioner in the instant Petition as mentioned above, the revised total cost for the proposed/executed works are detailed below:-

S. No.	Name of Project	District	Capacity	Length of 33 kV Line (km)	Total Cost (Rs. In Lakh)	Revised Total Cost (Rs. In Lakh [as per submission dated 31.10.2022])
1	Construction of 33 kV line from Generator's Switching Station at Village-Duguda, Ranikhet to 132/33 kV Substation Naini (Ranikhet) and 01 No. 33 kV "BAY" at 132/33 kV Substation Naini (Ranikhet) to evacuate Power Generated by different Solar Photovoltaic Power Plants	Almora	10 MWp	5.20	273.13	209.85
2	Construction of 33 kV line from generator's Switching Station Village-Patlibagad to 132/33 kV S/s Syalidhar (Almora) to evacuate Power Generated by 06 No. different Solar Photovoltaic Plants		15 MWp	13.56	534.26	481.79
3	Construction of 01 No. new 33/11 KV Substation alongwith its associated 33 kV line at Nakot, Tehri (Garhwal)	Tehri (G)	2x3 MVA	10.00	308.61	363.92

17. In-light of the above, the Commission grants in-principle approval for S. No. 1 & 2 of the above Table on the revised cost subject to fulfillment of terms and conditions mentioned at Para 18 below. With regard to the project mentioned at S. No. 3 of above Table, the Commission grants post-facto approval for the same subject to fulfillment of relevant terms and conditions mentioned at Para 18 below.
18. Terms and Conditions subject to which in-principle approval granted by the Commission are as follows:

- (1) The Petitioner should go for the competitive bidding for obtaining the most economical prices from the bidders and accordingly issue the Letter of Award to the successful bidder within one year of the date of issuance of this order else the investment approval stands cancelled and the Petitioner shall be required to approach the Commission for seeking investment approval of the project afresh.
- (2) 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 Quality, Optimum utilization of resources, Benefits accrued from the proposed investments etc.
- (3) The Petitioner should comply to the following CEA and UERC Regulations and amendments thereof while Construction and Operation & Maintenance of the lines and should ensure the compliance of relevant standards and the Project should be executed with due diligence so that minimal incidents of break downs/fault occurrences/ hindrances are faced during operation and maintenance of the underground electrical network:-
 - (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, 2010.
 - (c) Central Electricity Authority (Measures relating to Safety and Electricity Supply) Regulations, 2010.
 - (d) UERC (Distribution Code) Regulations, 2018.
- (4) The Petitioner must submit the detailed sanctioned letter from the Financial Institution to the Commission as soon as they get approval from the Financial Institution.
- (5) All the loan conditions as may be laid down by the funding agency i.e. REC in their detailed sanction letter should be strictly complied. However, the Petitioner is directed to explore the possibility of swapping the loan with cheaper debt option if any, available in the market etc.

- (6) 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 said works.
- (7) The cost of the project and servicing on the same shall be allowed in the Annual Revenue Requirement of the Petitioner after the assets are capitalized and subject to prudence check of the cost incurred.

Ordered accordingly.

(M.K. Jain)
Member (Technical)

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