**Before**

# UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

**Petition No. 02 of 2024**

**In the matter of:**

Petition under Section 86(1) (c), (e) (f) and (k) read with Section 30 of Electricity Act, 2003 and Regulation 43(1) of UERC (Tariff and other terms and for supply of electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulation, 2023 seeking permission of the Hon'ble Commission to connect the Petitioner's Suringad (5MW) small hydro plant from 33/11 kV Darati Sub-station of UPCL.

**In the matter of:**

Managing Director, UJVN Limited "UJJWAL", Maharani Bag, GMS Road, Dehradun

..... Petitioner

**AND**

**In the matter of:**

1. Managing Director, Uttarakhand Power Corporation Ltd. (UPCL)
2. Managing Director, Power Transmission Corporation of Uttarakhand Ltd. (PTCUL)
3. M/s Himalaya Hydro Private Limited.

…. Respondents

**CORAM**

**Shri D.P. Gairola, Member (Law)-Chairman (I/C)**

**Shri M. L. Prasad, Member (Technical)**

**Date of Hearing: January 31, 2024**

**Date of Order: February 02, 2024**

## ORDER

The Order relates to the Petition filed by UJVN Ltd. (hereinafter referred to as "the Petitioner") under Section 86(1) (c), (e) (f) and (k) read with Section 30 of The Electricity Act, 2003 and Regulations 43(1) of UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2023 seeking permission of the Commission to connect the Petitioner's Suringad (5 MW) small hydro plant from 33/11 Darati S/s of Uttarakhand Power Corporation Ltd. (hereinafter referred to as "the Respondent No. 1" or "Distribution Licensee" or "UPCL").

## 1. Background

1.1 The Petitioner, UJVN Ltd., is a company incorporated under the provisions of the Companies Act, 1956, having its registered office at UJJWAL, Maharani Bagh, GMS Road, Dehradun.

1.2 The Petitioner had completed construction of 5 MW Suringad Small Hydro Project in Pithoragarh District in April 2021. The Petitioner has been requesting UPCL for granting connectivity to its project for evacuation of power through 33/11 kV Darati S/s of UPCL, however, the said project of the Petitioner has not been granted connectivity.

1.3 Regarding the above, UPCL has been stating that due to existing evacuation constraints, it is not possible for it to provide connectivity at the 33/11 kV Darati S/s as the said S/s evacuates power of two SHP's namely Motighat and Tanga, 5 MW each of M/s Himalaya Hydro Power Ltd. (herein after referred to as "Respondent No. 3" or M/s HHPL)

1.4 This issue of connectivity of Petitioner's Power Plant initially came up before the Commission in the seventh Co-ordination Forum Meeting held at the Commission's office regarding the power evacuation issues relating to the SHPs of M/s Himalaya Hydro Private Ltd. and the Suringad of SHP of UJVN Ltd. recorded vide the MoM dated 12.12.2019. The Commission then decided to convene another meeting in February 2020 to discuss the issues relating to inter connection and evacuation of these SHPs in the region and till then status quo was to be maintained. Since then, subsequent meeting could not take place.

1.5 Later, M/s Himalaya Hydro Pvt. Ltd. filed a petition before the Commission on the apprehension that UPCL may provide connectivity to Suringad SHP of UJVNL from its 33/11 kV Darati S/s. The Commission vide order dated 30.06.2021 directed UPCL not to connect any other SHP to the 33/11 kV Darati S/s and /or existing 33 kV network till 220 kV Baram S/s along with associated lines is ready for evacuation.

1.6 Subsequent to this, UJVNL filed another Petition before the Commission on dated 11.01.2022 requesting connectivity for Suringad SHP. UJVNL alongwith the Petition submitted a 'Tentative Load Flow Study' dated 20.09.2021 prepared by PTCUL and later vide letter dated 04.03.2022 informed the Commission that a new 33 kV Seraghat-

Baram-Jauljivi line is being constructed by UPCL which shall form ring main system in the area and will redress the prevailing evacuation concerns. However, the Commission observed that this too shall not suffice for evacuation of power from the concerned SHP's and decided to reject the Petition vide order dated 23.03.2022.

1.7 Thereafter, UJVN Ltd. again filed a Petition before the Commission on 20.05.2022 requesting connectivity to Suringad SHP in light of construction of new line feeders namely, 33 kV Seraghat-Baram and Baram-Jauljivi line. Later during the proceedings UJVNL vide letter dated 28.05.2022 filed a Technical Feasibility Report dated 27.05.2022 prepared by UPCL which was based on the Tentative Revised Load Flow Study dated 09.03.2022 and had also submitted Tentative Modified Load Flow Study dated 24.05.2022. Subsequently, UJVN Ltd. submitted an amendment application dated 19.01.2023 before the Commission thereby amending its relief and requested the Commission for allowing it interim connectivity for Dry season only. Immediately after that, UJVNL vide letter dated 03.02.2023 filed a second amendment application amending the relief sought in its first amendment application dated 19.01.2023 thereby requesting the Commission to allow interim connectivity for Lean and Dry period. During the proceedings, UJVNL for the first time submitted Month-wise Generation Data of Motighat & Tanga station. Based on this Generation Data and considering the condition mentioned in the TFR the Commission allowed ad-interim connectivity to UJVNL. uptill 31.05.2023 with certain conditions. Relevant para of the said order is reproduced hereunder:

*"On the issue of ad-interim connectivity for dry & lean seasons, we have perused the latest generation data submitted by Petitioner. It appears that in addition to the power generated by the two SHPs of Respondent No. 3 namely Tanga (5MW) & Motighat (5MW), there is capacity in the 33 kV system of UPCL to accommodate evacuation of power from the Petitioner's Suringad SHP (5 MW). Besides this, during the hearing, Petitioner submitted that if connectivity is allowed, it shall take all possible measures to protect the interest of Respondent No. 3 and shall install Special Protection System (SPS), line reactor, capacitor bank etc. Moreover, Petitioner submitted that 1st right of evacuation shall vest with Respondent No. 3 and in case of evacuation constraints, Suringad SHP shall be backed down automatically using the SPS. Also, Petitioner submitted that it shall indemnify Respondent No. 3 for any loss of generation caused to Respondent No. 3 SHPs due to connectivity given*

*to Petitioner's Suringad SHP. It is pertinent to mention here that UPCL (Respondent No.1) has given its consent to this proposed connectivity arrangement.*

*Considering these submissions, we are of the view that first priority shall be given to evacuation of generation from Respondent No. 3 Motighat & Tanga SHPs and no compromise shall be made on that account. However, taking cognizance of the fact that 220/33kV Baram substation of Respondent No.2 (PTCUL), where reliable connectivity could be given to Motighat & Tanga SHPs, is delayed and is proposed to be commissioned by June 2024. Hence ad-interim connectivity is being allowed to Suringad SHP only upto 31.05.2023 subject to the fulfilment of following directives:*

***(i) UPCL shall provide ad-interim connectivity to the Petitioner's Suringad (5MW) SHP at 33/11 kV Darati Sub-Station only after ensuring that Petitioner, in coordination with UPCL, has installed Special Protection System (SPS), line reactor, Capacitor bank etc. for restricting the generation of Suringad SHP during evacuation constraint conditions and to regulate voltage within specified limits.***

***(ii) 1st right of evacuation shall vest with Respondent No. 3 and in case of evacuation constraints, Suringad SHP shall be backed down automatically using the SPS.***

*Further, UPCL is directed to instruct its Chief Engineer, Udham Singh Nagar Zone to monitor generation/voltage profile on daily basis and prepare a Technical Report containing the generation/voltage profile of the system for the ad-interim period with detail of power evacuation from three generating stations namely Motighat (5MW), Tanga (5MW) and Suringad (5MW) to be submitted to the Commission within 15 days from the period ending ad-interim connectivity i.e. by 15.06.2023."*

1.8 Against the aforesaid order of the Commission, M/s HHPL on dated 01.03.2023 filed an appeal (Appeal No. 275 of 2023) before the Hon'ble APTEL. However, after a few rounds of proceedings, M/s HHPL later submitted before the Hon'ble APTEL that the appeal has become infructuous as the period of ad-interim connectivity (31.05.2023) allowed by the Commission vide order dated 20.02.2023 has expired. Hence, the Hon'ble APTEL dismissed the appeal vide order dated 01.06.2023.

1.9 Subsequent to this and with the desire to get connectivity for its plant, UJVNL vide letter dated 06.09.2023 requested the Commission to consider the matter and for

issuing suitable orders for providing connectivity to Suringad SHP for the upcoming Lean and Dry season (w.e.f. October to May). In response to the said letter, the Commission vide letter dated 06.09.2023 directed UJVNL for filing fresh Petition in the matter. Accordingly, UJVNL vide letter dated 18.12.2023 filed the instant Petition. The Commission decided to admit the Petition on 29.12.2023 and vide letter dated 19.01.2024 informed the parties to appear before it for hearing on merits with a direction to the Respondents to submit their replies on the Petition. Accordingly, PTCUL vide letter dated 05.01.2024 and UJVNL vide letter dated 10.01.2024 submitted their reply before the Commission.

On the date of hearing i.e. 31.01.2024 the Commission heard all the parties in detail and have recorded their submissions in the following paras.

**2. Submission by Petitioner**

2.1 UJVNL in its submission has referred to a reply submitted by the officer of UPCL before the Hon'ble APTEL under affidavit dated 13.05.2023 wherein UPCL has expressed the possibility and approval for granting connectivity to Suringad SHP. Context of the said affidavit read as:

*"……..*

1. *That I in the above noted capacity am well conversant with the facts and records of the present case, hence am competent to swear this affidavit.*
2. *That in compliance of the order dated 20.02.2023 of the Hon'ble Uttarakhand Electricity Regulatory Commission the report has been received from Chief Engineer, Rudrapur Zone, UPCL which inter alia states as under:*
    - *(i) Conductor on 33 KV Line from 132 KV S/s Pithoragarh to Didihat has been upgraded in the month of December 2022*
    - *(ii) 33 KV Voltage profile is within the permissible limit at 33/11 KV s/s Darati and Tanga & Motighat SHP's end.*
    - *(iii) 33 KV network in the area has been upgraded by additionally contructing 33 KV line from Joljivi to Seraghat which provided alternate option to maintain, supply and power evacuation in the area in case of breakdown on main 33 KV feeder.*

(iv) *That the existing 33 KV network from 132 KV s/s Pithoragarh to Darati is capable of additional 5 MW power evacuation from Suringad SHP along with 2x5 MW power generation from M/s HHPL Motighat and Tanga SHP's.*

*A true copy of the report of Chief Engineer, Rudrapur Zone, UPCL is being enclosed herewith and marked as Annexure-1*

3. *That thus in the light of the load profile, there seems no transmission constraints in evacuation of power from all the three SHP's. Moreover, as per the direction of Hon'ble Commission UJVN Ltd. has already installed the Special Protection Scheme at Suringad SHP which will further secure the power evacuation from the HHPL plants in case of any fault or breakdown in Suringad SHP.*

4. *That thus in view of aforesaid report and Special Protection Scheme at Suringad SHP by UJVN Ltd., the replying Respondent has no objection for granting permission to evacuate power from Suringad SHP (UJVNL) on existing 33 KV network."*

2.2 Further, UJVNL has submitted that the above affidavit of UPCL states that 33 kV Voltage profile is within the permissible limit at 33/11 kV S/s Darati and Tanga & Motighat SHPs end. Hence, the Commission may consider connectivity to Suringad SHP.

2.3 UJVNL also submitted that UPCL in the aforesaid affidavit before the Hon'ble APTEL has informed that conductor on 33 kV line from 132 kV S/s Pithoragarh to Didihat has been upgraded in the month of December, 2022 and 33 kV network in the area has been upgraded by construction of 33 kV line from Jauljivi to Seraghat which provides alternate option to maintain supply and evacuate power in the area in case of break down on the main 33 kV feeder.

2.4 That UPCL in the TFR dated 27.05.2022 has already agreed to provide connectivity to Suringad SHP after installation of Special Protection System (SPS). Accordingly, UJVNL has already installed SPS on 13.05.2023 at both Suringad end and Darati S/s end to ensure backing down of generation at voltage less than the upper permissible voltage limit of 34.98 kV (33 kV+6%). UJVNL has informed that it has also installed Reactor and Capacitor in compliance to the order dated 20.02.2023 of the Hon'ble Commission for regulating voltage within specified limit.

2.5 UJVNL has submitted that Managing Director, UJVNL had constituted a committee of the officer of UJVNL, UPCL & PTCUL on 25.10.2023 which has analysed the MRI

data of Motighat & Tanga SHP of M/s HHPL for past one year (November 2022 to October 2023). Further, UJVNL has submitted,

*"…The Voltage and Load Data of every 15 minutes were extracted from MRI Data. Each day is divided in 04 parts:*

***a)** 6:00 to 10:00 Hrs – Morning Peak Hours*

***b)** 10:00 to 18:00 Hrs.- Day Off-Peak Hours*

***c)** 18:00 to 22:00 Hrs. – Night Peak Hours*

***d)** 22:00 Hrs. to 6:00 Hrs of next day – Night-off-peak Hours; Month wise average value of each part have been plotted in a graph. On the basis of graph of each part, the Committee in its report has shown that the transmission window for power evacuation of Suringad SHP is available in the months of January to May & December considering the upper voltage as 34.65 kV (whereas the permissible voltage limit is 33 kV +6% i.e., 34.98 kV)."*

2.6 In continuation to the above, UJVNL has requested the Commission to consider the aforesaid MRI data to allow connectivity to Suringad SHP for power evacuation in the month of January to May & December of Dry & Lean period from 33/11 kV Darati S/s of UPCL till the commissioning 220 kV Baram S/s and associated lines. Further, UJVNL has prayed that in view of the loss of public investment arising out of non-connectivity of Suringad SHP and in view of ongoing Dry Season, an ad-interim connectivity be allowed from 33/11 kV Darati S/s till the final order in the matter is issued.

## 3. Submission by Respondents

3.1 UPCL during the hearing has agreed for allowing connectivity to Suringad SHP of Petitioner with the fulfillment of the necessary condition as was directed by the Commission in its earlier Orders. Whereas, PTCUL has reserved from commenting on the issue of connectivity to Suringad SHP, however, on being enquired about the status of 220 kV Bharam S/s and associated lines submitted that the same shall be commissioned by November 2024.

3.2 M/s HHPL has submitted that UJVNL introduced the concept of "Dry & Lean" Season vide the amendment application dated 19.01.2023 by placing on records the national mission for clean Ganga notification dated 09.10.2018 which specifies Dry

Season from November to March and Lean Season falling in October, April & May. However, this concept of Dry & Lean Season is not applicable to M/s HHPL's SHP's since they are situated in the upper reaches of Himalayas on river Seraghat which originates at the Indo-Tibetan-Nepal region. That the concept of Dry Lean Season is only meant to define the minimum quantum of ecological water flow to be maintained in the Ganges River at various month of the year and has nothing to do with the water flow/hydrology of Seraghat river.

3.3 M/s HHPL has submitted that river Seraghat is fed by glacier and there is sufficient snow and rainfall throughout the year for it to run its SHP and that in the summer months of March, April & May there is high flow of water due to the melting snow which is supported by the historical generation data that demonstrates that the concept of Dry Lean Season is not applicable to its plant.

3.4 M/s HHPL has further submitted that UJVNL is misleading the Commission by stating that the voltage in UPCL's 33 kV networks is within the permissible limit. That despite UPCL upgrading its 33 kV Seraghat-Baram-Jauljivi network element in April/May 2023 has experienced no improvement in the stability and capacity of the said network. That the no. of failure and high voltage hours exceeding the permissible limit of 34.98 kV for the month of April 2023 to October 2023 is similar to that experienced in corresponding months of the year 2022 and that generation history in the month of March, April, May & December shows that the power generation output for its SHP's was close to or in excess of their installed capacity of 5 MW each.

3.5 With regard to the committee report dated 25.10.2023, M/s HHPL has submitted that the said report is incorrect, false and biased. It is strange that the said report uses data from the MRI meter reading reports of its SHP even though M/s HHPL was neither informed nor given an opportunity to submit its views/objection to the functioning and methodology used by the said committee.

3.6 Further, M/s HHPL has submitted that no Technical Feasibility Report has been issued by UPCL to UJVNL for proper evacuation for Suringad SHP and that UJVNL is relying on the TFR dated 27.05.2022 which has been rejected by the Commission.

3.7 That the indemnity bond executed between UPCL & UJVNL is illegal and void. That the Commission had already vide its order dated 23.03.2022 and 02.09.2022 had rejected such indemnity bond. Despite this, UJVNL & UPCL executing the indemnity

bond demonstrate that connecting Suringad SHP to the 33/11 kV Darati S/s would inevitably lead to generation loss.

3.8 M/s HHPL has submitted that there is an incorrect reliance on the allegedly installed Special Protection System as there is nothing special about it and it merely serves to trip UJVNL Suringad SHP in case over voltage in UPCL's 33 kV line. Further, CEA MoM clearly states that SPS can be installed only after Optical Fiber Communications Link/OPGW is established between the previously commissioned SHP's and new SHP.

3.9 Further, M/s HHPL has submitted UJVNL and UPCL have merely stated that the first right of evacuation would lie with M/s HHPL which is a mere platitude since there is no infallible mechanism to enforce the same. Unless the Commission guarantees M/s HHPL its revenue as per the design PLF of its SHP's on a monthly basis and not leave it to the mercy of UJVNL and/or UPCL, there is no incentive for UPCL to enforce M/s HHPL its right of first evacuation.

## 4. Commission Observations, View & Decision

4.1 We have heard the parties in detail and have recorded their submissions in the above paras of this order which we are incumbent upon to examine subsequently. This matter has been brought before us a couple of time in the recent past and this Commission had issued orders settling the issues then, however, the exercise we have taken upon to ourselves in the instant Petition is to examine what new facts are being produced before us. Before delving into the matter, our primary and cardinal consideration is to ensure that all stakeholders involved/affected in the matter are amply secured and their rights/interests are profusely protected. We cannot protect the interest of one party at the cost of other. Hence, the issues we deal here in this order are analysed with the spirit that safeguards the State power sector.

4.2 Now, coming on to the main issue that concerns this matter is the issue of allowing connectivity to Petitioner's Suringad SHP at 33/11 kV Darati S/s in lean and dry period. In this regard, we are informed that MD, UJVNL had constituted a Committee (Supra) to calculate the month wise transmission window for evacuation of power of Suringad SHP without affecting the production of other generators. MRI data of Motighat and Tanga SHPs from November 2022 to October 2023 was analyzed by the

Committee and it was concluded that transmission window was available for power evacuation of Suringad SHP as follows:

| Morning Peak Hours (06:00 -10:00) | Day off-peak Hours (10:00-18:00) | Evening peak Hours (18:00 -22:00) | Night off-peak Hours (22:00 -06:00) |
|---|---|---|---|
| January to May & December | January to May & December | January to May & December | January to May & December |

4.3 Further, it was concluded by the Committee that since the voltage of the area was below the permissible limit and also the tripping voltage limit (33 kV(+6%) and 33 kV(+5%), the setting of relays of the protection system of Suringad SHP and 33 kV Darati S/s as provided by UJVN Ltd. respectively) the demand is high but due to low discharge the load on the machines of Tanga and Motighat could not be increased, therefore, power from 5 MW Suringad SHP can be generated and effectively evacuated during the months of January to May & December. M/s HHPL strongly argued against the veracity of the Committee and its report, hence, we now delve into the data submitted by M/s HHPL.

4.4 M/s HHPL *per contra* has submitted a comparative statement of Grid failure & High Voltage Hours for the months of April 2022 to October 2024 and High Voltage Hours & Generation Load for the Motighat and Tanga SHPs for the months of April 2017 to October 2023 in Tables No. 1A, 1B, 2A, 2B, at page no. 22 to 25 of its submission dated 29.01.2024.

4.5 It is relevant to see the generation data for the months of December, January, February, March and April which is extracted from Tables 2A and 2B and is reproduced below:

| | 2017-18 | | | 2021-22 | | | 2022-23 | | | 2023-24 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Months** | **Motighat** | **Tanga** | **Total** | **Motighat** | **Tanga** | **Total** | **Motighat** | **Tanga** | **Total** | **Motighat** | **Tanga** | **Total** |
| April | 4.99 | 4.36 | 9.35 | 2.50 | - | 2.5 | 4.28 | 4.25 | 8.53 | 2.50 | 2.50 | 5.00 |
| December | 2.46 | 2.51 | 4.97 | 3.00 | 3.22 | 6.22 | 2.74 | 2.96 | 5.70 | - | - | - |
| January | 1.71 | 1.76 | 3.47 | 2.45 | 2.44 | 4.89 | 2.02 | 2.12 | 4.14 | - | - | - |
| February | 1.35 | 1.52 | 2.87 | 2.01 | 1.96 | 3.97 | 1.72 | 1.95 | 3.67 | - | - | - |
| March | 1.66 | 1.61 | 3.27 | 3.51 | 3.35 | 6.86 | 1.52 | 1.70 | 3.22 | - | - | - |

From the above Table it is evident that the total generation of Motighat and Tanga SHPs reduces from the month of December till March and is only about 30% of the total

installed capacity of the plants in the month of March. Thereafter, the generation increases from the month of April and reaches to about 80% of the total installed capacity in the said month. Meaning thereby that, evacuation of power from the Suringad SHP is possible during the months of December uptill March, when generation of Motighat and Tanga SHPs is low, thus, provide sufficient scope to ensure power evacuation from Suringad SHP.

4.6 Moving further, we wish to glance through the earlier order of the Commission dated 20.02.2023, wherein, the Commission had allowed ad-interim connectivity to Suringad SHP only upto 30.05.2023 with 33/11 kV Darati S/s. Relevant para of the said Order reads as:

> "*On the issue of ad-interim connectivity for dry & lean seasons, we have perused the latest generation data submitted by Petitioner. It appears that in addition to the power generated by the two SHPs of Respondent No. 3 namely Tanga (5MW) & Motighat (5MW), there is capacity in the 33 kV system of UPCL to accommodate evacuation of power from the Petitioner's Suringad SHP (5 MW). Besides this, during the hearing, Petitioner submitted that if connectivity is allowed, it shall take all possible measures to protect the interest of Respondent No. 3 and shall install Special Protection System (SPS), line reactor, capacitor bank etc. Moreover, Petitioner submitted that 1st right of evacuation shall vest with Respondent No. 3 and in case of evacuation constraints, Suringad SHP shall be backed down automatically using the SPS. Also, Petitioner submitted that it shall indemnify Respondent No. 3 for any loss of generation caused to Respondent No. 3 SHPs due to connectivity given to Petitioner's Suringad SHP. It is pertinent to mention here that UPCL (Respondent No.1) has given its consent to this proposed connectivity arrangement.*
>
> ***Considering these submissions, we are of the view that first priority shall be given to evacuation of generation from Respondent No. 3 Motighat & Tanga SHPs and no compromise shall be made on that account.*** *However, taking cognizance of the fact that 220/33kV Baram substation of Respondent No.2 (PTCUL), where reliable connectivity could be given to Motighat & Tanga SHPs, is delayed and is proposed to be commissioned by June 2024. Hence ad-interim connectivity is being allowed to Suringad SHP only upto 31.05.2023 subject to the fulfilment of following directives:*

***(i) UPCL shall provide ad-interim connectivity to the Petitioner's Suringad (5MW) SHP at 33/11 kV Darati Sub-Station only after ensuring that Petitioner, in coordination with UPCL, has installed Special Protection System (SPS), line reactor, Capacitor bank etc. for restricting the generation of Suringad SHP during evacuation constraint conditions and to regulate voltage within specified limits.***

***(ii) 1st right of evacuation shall vest with Respondent No. 3 and in case of evacuation constraints, Suringad SHP shall be backed down automatically using the SPS.***

*Further, UPCL is directed to instruct its Chief Engineer, Udham Singh Nagar Zone to monitor generation/voltage profile on daily basis and prepare a Technical Report containing the generation/voltage profile of the system for the ad-interim period with detail of power evacuation from three generating stations namely Motighat (5MW), Tanga (5MW) and Suringad (5MW) to be submitted to the Commission within 15 days from the period ending ad-interim connectivity i.e. by 15.06.2023."*

[Emphasis added]

4.7 In the above order of the Commission the prime consideration was to ensure that the interest of M/s HHPL is protected and hence, the Commission had directed Petitioner to ensure installation of Special Protection System (SPS), line reactor, Capacitor bank etc. for restricting the generation of Suringad SHP during evacuation constraint conditions and to regulate voltage within specified limits. In compliance to the above directions of the Commission, Petitioner has submitted that it has installed all necessary protection system as was required and directed in the above order. However, during the hearing, M/s HHPL agitated an issue regarding installation of OPGW cables. Regarding that, we have observed that the sole purpose here is to prevent over voltage beyond permissible limit at 33 kV Darati Sub-station and maintain reliable evacuation of power from SHPs in the area. Therefore, in order to monitor and control voltage at 33 kV Darati sub-station, a Special Protection System (SPS) scheme has been installed to sense lone parameter i.e. voltage. This voltage parameter is to be monitored at Darati sub-station Bus-bar level and in case of 33 kV voltage exceeding the limit i.e. 33kV (+5%) (proposed by UNVN Ltd.) in the SPS logic, the Suringad SHP of UJVN Ltd. would immediately trip and would be disconnected

from the grid. Now delving into the issue of communication link, here the requirement of OPGW cable has no significant relevance since the monitoring parameter is only voltage and why only one parameter i.e. voltage is being monitored is primarily due to the reason that connectivity of Suringad SHP is proposed to be given only during lean/dry season, therefore, there would not be instances/eventuality of over load conditions in the 33 kV evacuation lines since during lean/dry season, discharge in the river is minimal with resultant low generation by SHP much below capacity (load/current) of 33 kV line network in the Pithoragarh area. Had there been situation where there would have been the requirement of monitoring multiple parameters such as overcurrent, frequency, reactive power etc. and that to at distant locations from Darati Sub-station and up to various other sub-stations in the Pithoragarh 33 kV network of UPCL. Based on the above, it can be conclusively demonstrated that communication link as advanced as OPGW or communication link like PLCC has no relevance in this simplistic protection co-ordination scheme wherein the purpose is only to firstly trip the breaker of the Suringad SHP's generator in case of higher voltage incidence beyond the permissible limit at 33 kV Darati sub-station. Considering the above, the Commission is of the view that OPGW (Optical Ground Wire) is just a reliable communication link and may replace PLCC (power line carrier communication) link in future years and installation of such communication line would remain redundant in this protection coordination scenario where only one (1) parameter i.e. voltage and that too at only 33 kV sub-station, Darati is to be monitored & controlled. Therefore, SPS logic of protection with normal control cable would be efficient and quick enough to monitor the voltage and send command to trip the Suringad SHP's generator in the first instance sensing any high voltage beyond permissible limit set in the SPS logic.

4.8 Further, in order to control over voltage during low demand condition, UJVN Ltd. has also installed line reactor which would enable these SHPs to keep generating and pushing power into the grid adhering to their AVR capability.

4.9 In light of the above, the Commission is of the view that based on the submissions of the parties it seems that connectivity to Suringad SHP of the Petitioner at 33/11 kV Darati S/s is possible during low discharge period i.e. from 15th December to 15th March, hence, the Commission allows interim connectivity to Suringad SHP at

UPCL's 33/11 kV Darati Sub-station for the period starting from 15th December to 15th March, till commissioning of 220 kV Baram S/s and associated lines. Upon the expiry of the said interim connectivity period, Suringad SHP shall be disconnected from UPCL's 33/11 kV Darati S/s.

4.10 Further the Commission directs UPCL to instruct its Chief Engineer, Udham Singh Nagar Zone to monitor generation/voltage profile on daily basis and prepare a Technical Report containing the generation/voltage profile of the system for the interim period with detail of power evacuation from three generating stations namely Motighat (5MW), Tanga (5MW) and Suringad (5MW) to be submitted to the Commission within 15 days from the period ending interim connectivity i.e. by 15.04.2024

Ordered Accordingly.

**(M. L. Prasad)**
**Member (Technical)**

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