

# UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

‘Vidyut Niyamak Bhawan’, Near I.S.B.T., P.O.-Majra, Dehradun-248171

## Coram

Shri M.L. Prasad                      Member (Technical)-Chairman (I/c)

Shri Anurag Sharma              Member (Law)

**UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) (First Amendment) Regulations, 2024.**

## Statement of Reasons

1. The Commission had issued UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2023 (hereinafter referred to as “Principal Regulations, 2023” or “RE Regulations, 2023”) vide notification dated 26<sup>th</sup> August 2023.
2. Ministry of Power, Government of India (MoP, GoI) vide notification dated 20.10.2023 has revised the trajectory of RPO to be met by Obligated Entities. Further, MNRE vide its letter dated 28.11.2023 advised the distribution licensees in the country to plan in advance, to meet the renewable energy consumption norms to avoid the penalties.

Furthermore, MoP, GoI vide its letter dated 16.11.2023 directed the SERCs to comply with the Electricity (Rights of Consumers) Rules, 2020 regarding timelines for key activities for commissioning of grid interactive rooftop and small solar PV plants under net metering.

3. Further, the Ministry of Power vide its notification dated 31.12.2020 read with amendments dated 28.06.2021 and dated 14.06.2023 has specified the timeframe for Technical Feasibility Study and successful commissioning of the grid interactive Rooftop and small solar PV plants installed under net metering arrangement.
4. In view of the above, the Commission proposed the draft first amendment Regulation, 2024 covering **(A)** Revision of trajectory of RPO and **(B)** Timeline for feasibility study and installation of Grid Interactive Rooftop and Small Solar PV Plants. Last date of the submission of the comments/suggestions/objections was kept as 31.05.2024. The list of stakeholders who submitted comments is enclosed as **Annexure-I**.

The draft amendment proposed by the Commission in Regulation 10 and Regulation 37 of the Principal Regulations are as follows:

**1. “10. Minimum Quantum of electricity to be purchased by distribution licensees from ‘non-fossil fuel based co-generation and generation of electricity from renewable energy sources’**

- (1) In line with the provisions of the Act, National Electricity Policy, the Tariff Policy to promote development of renewable and non-conventional sources of energy, all existing and future distribution licensees, captive users and open access customers, hereinafter referred to as “Obligated Entity”, in the State shall be obliged to procure minimum percentage of their total electricity requirement for own consumption, as indicated below, from eligible renewable energy sources as defined under Regulation 4. The same shall be called the Renewable Purchase Obligation (RPO) of the Obligated Entities.

Year	Wind RPO	Hydro Purchase Obligation (HPO)	Distributed RPO	Other RPO	Total RPO
2024-25	0.67%	0.38%	0.75%	28.10%	29.91%
2025-26	1.45%	1.22%	1.05%	29.29%	33.01%
2026-27	1.97%	1.34%	1.35%	31.29%	35.95%
2027-28	2.45%	1.42%	1.65%	33.29%	38.81%
2028-29	2.95%	1.42%	1.95%	35.05%	41.36%
2029-30	3.48%	1.33%	2.25%	36.27%	43.33%

- a. Wind RPO shall be met only by energy produced from Wind Power Projects (WPPs), commissioned after 31<sup>st</sup> March 2024.
- b. HPO shall be met only by energy purchased from HPPs (including PSPs and Small Hydro Projects (SHPs)), commissioned after 8<sup>th</sup> March 2019.

*Provided that HPO obligation of the Distribution licensee may also be met out of the free power being provided to the State from HPPs (including PSPs and SHPs), commissioned after 08<sup>th</sup> March 2019.*

*Provided further that the hydro renewable energy component may also be met from Hydro Power Projects located outside India as approved by the Central Government on a case to case basis.*

- c. Distributed renewable energy component shall be met only from the energy generated from renewable energy projects that are less than 10 MW in size and shall include solar installations under all configuration (net metering, gross metering, virtual net metering, group net metering, behind the meter installation and any other configuration) notified by the Central Government.

*Provided that the compliance against distributed renewable energy shall ordinarily be considered in terms of energy (kWh/kW/day).*

*Provided further that in case the obligated entity is unable to provide generation data against distributed renewable energy installations, the reported capacity shall be transformed into distributed renewable energy generation in terms of energy by a multiplier of 3.5 units per kW/day.*

- d. Other RPO shall be met by energy produced from any RE power project not mentioned in (a), (b) and (c) above and shall comprise energy from all Wind Power Projects, HPPs (including PSPs and SHPs) including free power.

Percentage RPO as stipulated above denotes Minimum Quantum of purchase from non-fossil fuel based co-generation and generation of electricity from renewable energy sources' as a percentage of total energy purchased from all sources/generated by the Obligated Entity during the year for own consumption.

Where, total energy purchased for different obligated entities shall be as under:

- a. For Discoms, total energy purchased from all sources during the year for own consumption; and
- b. For Open Access consumers, total energy purchase through Open Access shall be metered consumption recorded at drawl/consumption point during the year for own consumption.
- c. For Captive users, total energy purchased shall be metered consumption recorded at drawl/consumption point during the year for own consumption.

Provided that any shortfall in achievement of Wind RPO in a particular year can be met with excess energy consumed from Hydro Power Projects or and vice-versa and the balance excess energy consumption under Wind RPO or HPO in a particular year, can be set off against the shortfall in achievement of 'Other RPO'.

Provided that any excess energy consumption under 'Other RPO' category in a particular year can be utilised to meet the shortfall in achievement of specified Wind RPO or Hydro RPO.

Provided that obligated entities which are open access consumers or consumers with Captive Power Plants shall fulfil their obligation as per the specified total renewable energy target irrespective of the non-fossil fuel source.

- (2) For the purpose of this RPO framework, for every obligated entity, own consumption would mean gross energy consumed or purchased by the obligated entity from all sources for its own use or for the purpose of supply to its consumers within its area of supply, excluding any inter-se sale of electricity amongst the Licensees or outside consumers.
- (3) Distribution licensee shall be eligible to utilise the gross Solar energy generated from the GRPV/GSPV of non-obligated entities for meeting its 'Solar RPO' compliance based on the gross energy generated meter reading of such GRPV/GSPV.
- (4) The following percentage of total energy consumed shall be solar/wind energy alongwith/through storage.

<b>Financial Year</b>	<b>Storage (on Energy basis)</b>
2024-25	1.5%
2025-26	2.0%
2026-27	2.5%
2027-28	3.0%
2028-29	3.5%
2029-30	4.0%

- (5) *The Energy Storage Obligation shall be calculated in energy terms as a percentage of total consumption of electricity and shall be treated as fulfilled only when and at least 85% of the total energy storage in the Energy Storage System (ESS), on an annual basis, is procured from renewable energy sources.*
- (6) *The Energy Storage Obligation to the extent of energy stored from RE sources shall be considered as a part of fulfilment of the total RPO as mentioned under sub-regulation (1) of this regulation.*
- (7) *UREDA will maintain the data related to compliance of RPO Obligation."*

**2. "37. Grid Interactive Roof-top Solar PV Plants (GRPV)/Grid Interactive Small Solar PV Plants (GSPV)**

- (1) *The technology specific parameters for determination of generic tariff for GRPV/GSPV commissioned or to be commissioned on or after 01.04.2023 shall be as below:*

<b>Project Size</b>	<b>Capital Cost</b>	<b>O&amp;M Expenses for year of commissioning</b>	<b>Capacity Utilization Factor</b>
	<b>(Rs./kW)</b>	<b>(Rs./kW)</b>	
<i>Upto 10 kW</i>	47691	2149	19 %
<i>&gt;10 kW &amp; upto 100 kW</i>	43753	1912	
<i>&gt;100 kW &amp; upto 500 kW</i>	41276	1735	
<i>&gt;500 kW and upto 1 MW</i>	40074	1624	

- (2) *GRPV/GSPV can be installed for injecting power into the distribution system of a licensee by any Eligible consumer:*

*Provided that the maximum GRPV/GSPV installed capacity at any Eligible Consumer's premises shall be upto a maximum of 100% of consumer's sanctioned load/contract demand;*

*Provided that in case of Domestic Consumer, such installed capacity of GRPV/GSPV shall be irrespective of consumer's sanctioned load/contract demand;*

*Provided, the maximum installed capacity of GRPV/GSPV at the premises of eligible consumer shall not be more than 1 MW.*

- (3) *Injection from GRPV/GSPV owned by the Eligible consumer or by third party shall be settled on Net Energy basis at the end of each Billing period.*

- (4) *The tariff, as per tariff orders of the Commission, in respect of the supply of electricity to the consumers by the distribution licensee shall be applicable for the Net Energy supplied by the licensee in a billing period if the supplied energy by the licensee is more than the energy injected by the GSPV/GSPV of the consumer or by third party:*

*Provided that such eligible consumer shall be exempted from payment of monthly minimum charges/monthly minimum consumption guarantee charges, if any, equivalent to the capacity of GRPV/GSPV installed at the premises;*

*Provided further that no open access charges including surcharges shall be leviable on such eligible*

*consumers for the captive use of power.*

- (5) If in a billing period the supplied energy by the licensee is less than the energy injected by the GRPV/GSPV of the consumer/prosumer or the third party, subject to provisions in sub-Regulation (3) above, the licensee would pay to such prosumer at the generic tariff as may be specified by the Commission or at the rate discovered through tariff based bidding process whichever is lower for such Net Energy supplied to it.*
- (6) Provisions of Deemed Generation shall not be applicable on GRPV/GSPV.*
- (7) The cumulative capacity of GRPV/GSPV which can be connected to a single transformer shall not exceed the capacity of such transformer.*
- (8) In case any augmentation is required for the purpose of connecting GRPV/GSPV, Distribution Licensee shall facilitate and bear the capital expenditure on account of such system strengthening/augmentation upto the interconnection point from nearest sub-station.*
- (9) Virtual Net Metering Framework shall be applicable for consumers under domestic category, offices of Government /Local Authorities.*
- (10) Timeline for key activities shall be governed by the time specified under the Electricity (Rights of Consumers) Rules, 2020 as amended from time to time."*

The comments/suggestions/objections received from the stakeholders in respect of draft amendment and the views of the Commission on the same are discussed in the subsequent paragraphs.

#### **Comments / Suggestions / Objections of the stakeholders and Analysis & Decision of the Commission:**

##### **A. Revision of trajectory of RPO**

###### **1. Comments received:**

###### **1.1. UJVN Ltd.**

UJVN Ltd. has requested for separate RPO Category for Solar Power to meet the ambitious target of 2500 MW Solar Power for upcoming 5 years under Uttarakhand Solar Policy, 2023. The Stakeholder submitted that in the absence of "Solar RPO" category in Regulations, UPCL will be hesitant to purchase solar power as it is already achieving the target in clubbed RPO category. Therefore, original provision of RPO as per Principal Regulations, 2023 is required to be restored.

###### **1.2. UPCL**

UPCL requested to allow to meet the shortfall of Distributed Renewable Energy Component in a particular year with Other RPO and vice-versa.

Further, with regard to Wind RPO, UPCL submitted that wind power projects commissioned after March 31<sup>st</sup>, 2022 should be considered for Wind RPO instead of March, 2024 as UPCL is already procuring wind energy from the projects with the date of commissioning as 31<sup>st</sup> March 2023 which is planned as per the Principal RE Regulations, 2023 wherein Wind RPO can be met with energy produced from Wind Energy Projects commissioned after March 31<sup>st</sup> 2022.

UPCL also requested the Commission to consider Pump Storage Plants under Energy Storage Obligation as both PSP and BESS are same forms of Energy Storage and works on the same mechanism of storing the energy during Off Peak Hours and serving the stored energy during Peak hours. Further, at present viable avenues of battery energy storage are limited and are very expensive and UPCL has already a share of 200 MW in Tehri PSP which is to be commissioned in September, 2024.

### **1.3. Shri Hardeep Rajput**

According to the proposed draft amendment Regulations, RPO of other non-conventional technologies are mentioned, Wind RPO in particular is not suited for Uttarakhand as wind power plants are not financially and technically viable for the State. We had pirul plant-based bio plant power generation policy, 2018 and there is a huge opportunity to make biomass based industry due to vast landscape of forest. It is requested to mandate separate Biomass RPO for promotion of biomass plants in the State.

### **1.4. Dr Anoop Singh**

With regard to second proviso of Regulation 10(c) of the proposed amendment, it is submitted that the multiplier factor 3.5 units considered according to MoP notification must be tailored to the resources available in the state of Uttarakhand. The solar irradiance varies according to geography and seasons. During period of low intensity radiation, there will be no incentive for solar power producer to provide actual energy production data as deemed generation calculated using the multiplication factor would result in higher amount of solar energy generated. This would result in ghost RPO met from such entities.

The Stakeholder suggested to provide a monthly multiplier factor based on benchmarked capacity utilisation factor (CUF) of solar plants located in the state. This can later be revisited based on more reliable data collected from the projects located across the State. Such a benchmark can be defined for different regions across the State. Continued non-reporting of data can be further penalised by applying a factor of 0.9-0.8 over and above the benchmark CUF for the applicable month(s) for non-reporting of data for more than 3 months

in a span of 5 years. This would incentivise the generator to report actual electricity generation data.

With regard to Wind RPO, the Stakeholder submitted that the Commission must take into consideration the topography of the State, i.e. hilly terrain covered with forest and glaciers. Installation of any wind power plant may not be economically viable. Furthermore, purchasing electricity generated from wind power plant from any other RE-rich state is expensive as the discom will have to bear the cost of transmission loss for energy imported from other States. While Renewable Energy Certificate's would also enable the obligated entities to meet their RPO, additional flexibility may be provided from the obligated entities to fulfil their RPO from other sources which are in abundance in the State.

## **2. Commission's view and decision**

- 2.1. With regard to the comments of UJVN Ltd. for separate RPO category for Solar power, it is pertinent to mention that the present trajectory of renewable purchase obligation is aligned with the notification dated 20.10.2023 of Ministry of Power, GoI. The Commission observed that the State Government of Uttarakhand has notified Solar Policy, 2023 in which an ambitious target of 2500 MW has been set to install solar power plants by 2027. In the matter, it is pertinent to mention that a separate RPO category, i.e. Distributed RPO has been specified in the regulation covering Solar Power Plants having capacities less than 10 MW which includes solar installations under all configurations (net metering, gross metering, virtual net metering, group net metering, behind the meter installations and any other configuration) notified by the Central Government. Further, other Solar Power plants having capacity 10 MW and more under all configurations are already covered under "Other RPO" Category which is on higher side in comparison to RPO specified for Wind, HPO and distributed Solar.
- 2.2. As far as UPCL's comment for adjustment of surplus/shortfall in achieving Distributed Renewable Energy Component is concerned, it is pertinent to mention that GoI has set an ambitious Solar Capacity targets for the nation and aligning with the targets of GoI, the State Government has also set a target of 1400 MW under distributed Solar Energy. Allowing the adjustment of distributed RPO with the Other RPO shall defeat the purpose, i.e. development of small-scale solar power plants having capacity less than 10 MW in all configurations. Further, Ministry of Power, GoI has also not allowed such adjustment for the purpose of promotion of small-scale solar power plants. Accordingly, based on the above, the Commission does not find it prudent to allow settlement of surplus/shortfall energy under distributed RPO with 'Other RPO. Further, with the solar plants already commissioned or likely to be commissioned under the Solar Policy, 2023 issued by the State Government, the Commission is

of the opinion that UPCL will not be having any shortfall in meeting this RPO. Hence, the request of the stakeholder is rejected.

Further, with regard to UPCL's comment requesting to consider Wind power plants commissioned after 31st March 2022 instead of 31st March 2024 for meeting the Wind RPO, the Commission observed that UPCL vide its Petition dated 29.11.2021 had sought approval of the Commission on PSA with SECI for procurement of solar power to meet its Solar RPO and wind energy to meet out its 'Non-Solar RPO' which has been subsequently segregated into the category of Wind RPO, HPO, Other RPO by the Commission vide its UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) (First amendment) Regulations, 2023 notified on 21.03.2023. Further, UPCL also submitted that it has been procuring wind power since 31<sup>st</sup> March 2023 from SECI under PSA. In view of the above, the Commission decides to make necessary modification in the relevant provision of the regulation.

Furthermore, UPCL has requested the Commission to consider the Pump Storage Plants (PSP) under the Energy Storage Obligation as both PSP and Battery Energy Storage System (BESS) are the forms of energy storage and works on the same mechanism. In the matter, it is pertinent to mention that Ministry of Power, GoI vide its various Orders has explicitly considered Pump Storage Plants under the category of Hydro Purchase Obligation. In the matter, the Commission does not find it prudent to deviate from the orders of Ministry of Power. Therefore, the request of the Stakeholder is rejected.

2.3. Shri Hardeep Rajput requested the Commission to mandate Biomass RPO. In the matter, it is to be noted that the Commission has specified separate RPO trajectory for most of the renewable energy based power plants, i.e. Wind, Hydro and Solar and a higher percentage of RPO has been specified for other remaining renewable energy based power plants including Biomass. Therefore, the Commission does not find it prudent to allow a separate category for Biomass energy. Hence, the request of the Stakeholder is rejected.

2.4. Dr Anoop Singh has submitted that installation of wind power plants in Uttarakhand is not economically viable considering the topography of the State. Further, purchasing electricity generated from wind power plants from any other RE rich State is expensive as the discom will have to bear cost of transmission losses. In the matter, it is pertinent to mention that the regulations allow the obligated entities to settle any shortfall in achievement of Wind RPO to be met with surplus energy consumed from Hydro Power and/or Other RPO.

Further, with regard to the comments of the stakeholder regarding multiplier factor, the



study is to be done to determine the State specific multiplier factor. **Accordingly, the Commission directs the distribution licensee to collect gross generation data of the distributed solar power plants for the last two years and submit the same to the Commission within six months from the date of issuance of these amendments.** Till then the Commission decides to keep the multiplier factor as 3.5 unit and shall revisit the same in future based on the information submitted by distribution licensee.

Accordingly, based on the above discussion, the Commission hereby modifies Regulation 10 of the Principal Regulations, 2023 which shall now be read as follows:

***“10. Minimum Quantum of electricity to be purchased by distribution licensees from ‘non-fossil fuel based co-generation and generation of electricity from renewable energy sources’***

*(1) In line with the provisions of the Act, National Electricity Policy, the Tariff Policy to promote development of renewable and non-conventional sources of energy, all existing and future distribution licensees, captive users and open access customers, hereinafter referred to as “Obligated Entity”, in the State shall be obliged to procure minimum percentage of their total electricity requirement for own consumption, as indicated below, from eligible renewable energy sources as defined under Regulation 4. The same shall be called the Renewable Purchase Obligation (RPO) of the Obligated Entities.*

<b>Year</b>	<b>Wind RPO</b>	<b>Hydro Purchase Obligation (HPO)</b>	<b>Distributed RPO</b>	<b>Other RPO</b>	<b>Total RPO</b>
2024-25	0.67%	0.38%	0.75%	28.10%	29.91%
2025-26	1.45%	1.22%	1.05%	29.29%	33.01%
2026-27	1.97%	1.34%	1.35%	31.29%	35.95%
2027-28	2.45%	1.42%	1.65%	33.29%	38.81%
2028-29	2.95%	1.42%	1.95%	35.05%	41.36%
2029-30	3.48%	1.33%	2.25%	36.27%	43.33%

- a. Wind RPO shall be met only by energy produced from Wind Power Projects (WPPs), commissioned after 31<sup>st</sup> March 2022.
- b. HPO shall be met only by energy purchased from HPPs (including PSPs and Small Hydro Projects (SHPs)), commissioned after 8<sup>th</sup> March 2019.

*Provided that HPO obligation of the Distribution licensee may also be met out of the free power being provided to the State from HPPs (including PSPs and SHPs), commissioned after 08<sup>th</sup> March 2019.*

*Provided further that the hydro renewable energy component may also be met from Hydro Power Projects located outside India as approved by the Central Government on a case to case basis.*

- c. Distributed renewable energy component shall be met only from the energy generated from renewable energy projects that are less than 10 MW in size and shall include solar installations under all configuration (net metering, gross metering, virtual net metering, group net metering, behind the meter

installation and any other configuration) notified by the Central Government.

Provided that the compliance against distributed renewable energy shall ordinarily be considered in terms of energy (kWh/kW/day).

Provided further that in case the obligated entity is unable to provide generation data against distributed renewable energy installations, the reported capacity shall be transformed into distributed renewable energy generation in terms of energy by a multiplier of 3.5 units per kW/day.

- d. Other RPO shall be met by energy produced from any RE power project not mentioned in (a), (b) and (c) above and shall comprise energy from all Wind Power Projects, HPPs (including PSPs and SHPs) including free power.

Percentage RPO as stipulated above denotes Minimum Quantum of purchase from non-fossil fuel based co-generation and generation of electricity from renewable energy sources' as a percentage of total energy purchased from all sources/generated by the Obligated Entity during the year for own consumption.

Where, total energy purchased for different obligated entities shall be as under:

- a. For Discoms, total energy purchased from all sources during the year for own consumption; and
- b. For Open Access consumers, total energy purchase through Open Access shall be metered consumption recorded at drawl/consumption point during the year for own consumption.
- c. For Captive users, total energy purchased shall be metered consumption recorded at drawl/consumption point during the year for own consumption.

Provided that any shortfall in achievement of 'Wind RPO' in a particular year can be met with excess energy consumed from Hydro Power Projects or and vice-versa and the balance excess energy consumption under Wind RPO or HPO in a particular year, can be set off against the shortfall in achievement of 'Other RPO'.

Provided that any excess energy consumption under 'Other RPO' category in a particular year can be utilised to meet the shortfall in achievement of specified Wind RPO or Hydro RPO.

Provided that obligated entities which are open access consumers or consumers with Captive Power Plants shall fulfil their obligation as per the specified total renewable energy target irrespective of the non-fossil fuel source.

(2) For the purpose of this RPO framework, for every obligated entity, own consumption would mean gross energy consumed or purchased by the obligated entity from all sources for its own use or for the purpose of supply to its consumers within its area of supply, excluding any inter-se sale of electricity amongst the Licensees or outside consumers.

(3) Distribution licensee shall be eligible to utilise the gross Solar energy generated from the GRPV/GSPV/Group Net Metering/Virtual Net Metering of non-obligated entities for meeting its 'Solar RPO' compliance based on the gross energy generated meter reading of such GRPV/GSPV.

(4) The following percentage of total energy consumed shall be solar/wind energy alongwith/through

storage.

<i>Financial Year</i>	<i>Storage (on Energy basis)</i>
2024-25	1.5%
2025-26	2.0%
2026-27	2.5%
2027-28	3.0%
2028-29	3.5%
2029-30	4.0%

(5) *The Energy Storage Obligation shall be calculated in energy terms as a percentage of total consumption of electricity and shall be treated as fulfilled only when and at least 85% of the total energy storage in the Energy Storage System (ESS), on an annual basis, is procured from renewable energy sources.*

(6) *The Energy Storage Obligation to the extent of energy stored from RE sources shall be considered as a part of fulfilment of the total RPO as mentioned under sub-regulation (1) of this regulation.*

(7) *UREDA will maintain the data related to compliance of RPO Obligation."*

## **B. Timeline for feasibility study and installation of Grid Interactive Rooftop and Small Solar PV Plants.**

### **1. Comments received:**

#### **1.1. UPCL**

With regard to timelines for key activities, UPCL submitted that no feasibility study is required for Rooftop Solar PV plants having capacity upto 10 kW.

Further, the Stakeholder requested the Commission to insert appropriate provision w.r.t. additional security deposit in case of enhancement of the sanctioned load of the consumer.

Furthermore, the Stakeholder also requested the Commission to allow the pass through of any expenses which shall be incurred by UPCL for upgradation of distribution infrastructure like augmentation of service line, distribution transformer capacity for the installation of the required capacity of Rooftop Solar PV plant, in the ARR.

### **2. Commission's view and decision**

The Commission observed that Ministry of Power has issued the Electricity (Rights of Consumers) Amendment Rules, 2024 vide notification dated 22.02.2024 vide which it has specified that technical feasibility study and any commensurate enhancement of the sanctioned load of the consumer shall not be required for Rooftop Solar PV plants having capacity upto 10 kW. Accordingly, the Commission has decided to incorporate appropriate provisions in Regulation 37 in this regard.

Further, the Stakeholder also requested the Commission to approve recovery of the expenses pertaining to upgradation of distribution infrastructure for the installation of the required capacity of Rooftop and Small Solar PV plants through Annual Revenue Requirement. In the matter, it is to be noted that all the capital expenditure incurred by the distribution licensee which are required for smooth flow of electricity from generator to end consumer are taken into consideration by the Commission after prudence check while approving the Annual Revenue Requirement of the utility which is governed by the existing Tariff Regulations.

Further, with regard to additional security deposit on account of enhancement of sanctioned load, it is to be noted that the same is governed by UERC Supply Code, 2020 as amended from time to time. However, for the purpose of clarity amongst prosumers, the Commission accepts the request of the Stakeholder

Accordingly, based on the above discussion, the Commission hereby modifies Regulation 10 of the Principal Regulations, 2023 which shall now be read as follows:

***“37. Grid Interactive Roof-top Solar PV Plants (GRPV)/Grid Interactive Small Solar PV Plants (GSPV)***

- (1) *The technology specific parameters for determination of generic tariff for GRPV/GSPV commissioned or to be commissioned on or after 01.04.2023 shall be as below:*

<b><i>Project Size</i></b>	<b><i>Capital Cost</i></b>	<b><i>O&amp;M Expenses for year of commissioning</i></b>	<b><i>Capacity Utilization Factor</i></b>
	<b><i>(Rs./kW)</i></b>	<b><i>(Rs./kW)</i></b>	
<i>Upto 10 kW</i>	47691	2149	19 %
<i>&gt;10 kW &amp; upto 100 kW</i>	43753	1912	
<i>&gt;100 kW &amp; upto 500 kW</i>	41276	1735	
<i>&gt;500 kW and upto 1 MW</i>	40074	1624	

- (2) *GRPV/GSPV can be installed for injecting power into the distribution system of a licensee by any Eligible consumer:*

*Provided that the maximum GRPV/GSPV installed capacity at any Eligible Consumer’s premises shall be upto a maximum of 100% of consumer’s sanctioned load/contract demand;*

*Provided that in case of Domestic Consumer, such installed capacity of GRPV/GSPV shall be irrespective of consumer’s sanctioned load/contract demand;*

*Provided, the maximum installed capacity of GRPV/GSPV at the premises of eligible consumer shall not be more than 1 MW.*

- (3) *Injection from GRPV/GSPV owned by the Eligible consumer or by third party shall be settled on Net Energy basis at the end of each Billing period.*

- (4) *The tariff, as per tariff orders of the Commission, in respect of the supply of electricity to the consumers by the distribution licensee shall be applicable for the Net Energy supplied by the licensee in a billing period if the supplied energy by the licensee is more than the energy injected by the GRPV/GSPV of the consumer or by third party:*

*Provided that such eligible consumer shall be exempted from payment of monthly minimum charges/monthly minimum consumption guarantee charges, if any, equivalent to the capacity of GRPV/GSPV installed at the premises;*

*Provided further that no open access charges including surcharges shall be leviable on such eligible consumers for the captive use of power.*

- (5) *If in a billing period the supplied energy by the licensee is less than the energy injected by the GRPV/GSPV of the consumer/prosumer or the third party, subject to provisions in sub-Regulation (3) above, the licensee would pay to such prosumer at the generic tariff as may be specified by the Commission or at the rate discovered through tariff based bidding process whichever is lower for such Net Energy supplied to it.*
- (6) *Provisions of Deemed Generation shall not be applicable on GRPV/GSPV.*
- (7) *The cumulative capacity of GRPV/GSPV which can be connected to a single transformer shall not exceed the capacity of such transformer.*
- (8) *In case any augmentation is required for the purpose of connecting GRPV/GSPV, Distribution Licensee shall facilitate and bear the capital expenditure on account of such system strengthening/augmentation upto the interconnection point from nearest sub-station.*
- (9) *Virtual Net Metering Framework shall be applicable for consumers under domestic category, offices of Government /Local Authorities.*
- (10) *Timeline for key activities shall be governed by the time specified under the Electricity (Rights of Consumers) Rules, 2020 as amended from time to time.*
- (11) *The applications for GRPV/GSPV upto 10 kW capacity, complete in all respects may be deemed to have been accepted without requiring technical feasibility study and any commensurate enhancement of the sanctioned load of the consumer, as may be required shall be carried out by the distribution licensee in accordance with the provisions of UERC (The Electricity Supply Code, Release of New Connections and Related Matters) Regulations, 2020 as amended from time to time.*

*Provided that the Prosumer shall be liable to pay charges towards load enhancement and security deposit for the enhanced load in accordance with the provisions of UERC (The Electricity Supply Code, Release of New Connections and Related Matters) Regulations, 2020 as amended from time to time*

(12) *During the time period from the feasibility study or deemed acceptance of the application till the completion of installation, in case, there is any requirement of upgradation of distribution infrastructure like augmentation of service line, distribution transformer capacity, and the like for installation of the required capacity of roof top solar photo voltaic system, the same shall be carried out by the distribution licensee or consumer, as the case may be.*

*Provided that the cost of strengthening the distribution infrastructure, including distribution transformer, as necessary, to facilitate the installation of roof top solar photovoltaic systems shall be included in the annual revenue requirement of the distribution licensee.*

(13) *After installation of roof top solar photovoltaic system, the consumer shall submit the installation certificate to such distribution licensee and such distribution licensee shall complete signing of connection agreement, installation of meter and successful commissioning of the roof top solar photovoltaic system within fifteen days from the date of submission of the installation certificate."*

### **C. Other Comments:**

#### **UJVN Ltd.**

With regard to the ceiling limit specified under Regulation 41(1) of RE Regulations, 2023 for Virtual Net Metering and Group Net Metering, i.e. 5 kW to 75 kW, UJVN Ltd. submitted that under net metering arrangement, UJVN Ltd. have 6 nos. of Solar Rooftop Solar Plants with total capacity of 191 kW (capacity varies from 8 kW to 100 kW) over various office buildings and 7 nos. of other Rooftop Solar Plants are proposed in other location of UJVN Ltd. Under net metering arrangement, UPCL does not pass any benefit on account of surplus generation from these rooftop solar plants.

As per RE Regulations, 2023, the capacity of individual Rooftop Solar PV Plants is capped at 1 MW while capacity of Virtual/Group Net Metering is capped at 75 kW. It is also submitted that the State of Gujarat and Himachal Pradesh has specified the maximum capacity under Virtual/Group Net Metering as 1 MW.

UJVN Ltd. also submitted that 32 kW Rooftop Solar Plants at Ganga Bhawan export excess energy to grid due to lesser in-house power consumption during 4 to 5 months in a year. UJVN Ltd. is not getting any benefits on account of net export of power to UPCL during these 4 to 5 months whereas 100 kW Rooftop Solar Plant at Ujjwal Bhawan premises always import power throughout the whole year because of higher in-house power consumption. If the capping of Virtual Net Metering and Group Net Metering is amended in RE Regulations, 2023, the surplus power generated from rooftop solar power plants at Ganga Bhawan may be adjusted against rooftop Solar plant at Ujjwal Bhawan.

### **Commission's view and decision**

With reference to the request of the Stakeholder to align the capping capacity specified under Group/Virtual Net Metering arrangement and Net Metering Arrangement for Rooftop and Small Solar PV plants under Regulation 37, it is pertinent to mention that the Commission vide SOR to Principal Regulations has already provided reasoning for keeping ceiling limit upto 75 kW which is as follows:

*"With regard to increase in upper capacity limit of 75 kW for installation of solar power plant under Virtual Net Metering (VNM) and Group Net Metering (GNM), the Commission does not agree with the proposal of the stakeholder as VNM and GNM are in nascent stages. Further, capacities upto 75 kW may be installed at LT network of the distribution licensee without any requirement of any augmentation of the existing infrastructure. The Commission will revisit the same in future based on the development of the same"*

The Commission had issued Principal Regulations on 26.08.2023 and not even one year has passed. It will not be appropriate to increase the limit at this point of time without analysing the impact on the distribution licensee network and financial adjustment of the same. Besides amending the ceiling on the request of UJVN Ltd. will lead to plethora of such requests which may have an adverse impact on the distribution licensee. Besides UJVN Ltd. was well acquainted of the Regulatory provisions and after due consideration of those, it would have commissioned its solar plants. Now raising the issue of it injecting surplus power into the grid free of cost does not hold good, besides there may be other developers also who would be in the same situations. Therefore, the Commission rejects the request of the Stakeholder.

Further, the Stakeholder requested the Commission to increase the capping limit upto 1 MW stating that surplus energy is being injected into grid from the various Rooftop Solar Power Plants of the Stakeholder without getting any benefit. Increased capping will help the Stakeholder to adjust the surplus energy injected at various location with the energy requirement of Ujjwal Bhawan. The Commission observed that the Stakeholder's Rooftop Solar Power plants are installed under NoC model where no PPA has been executed with UPCL. Further, it was one of the conditions allowing NoC/grid support by the distribution licensee that surplus energy shall be injected into the grid free of cost. The Commission does not find it prudent to allow shifting from one net metering arrangement which has already been agreed amongst parties to another arrangement, i.e. Virtual/Group Net Metering because the same will be more beneficial for the Stakeholder.

Furthermore, the Commission has gone through the definitions of the Group Net Metering which specifies as follows:

*""Group Net Metering" means an arrangement whereby **surplus energy** is generated and injected*

*from a solar power plant through net meter and such surplus energy exported shall be **adjusted in more than one electricity service connection(s) of the same consumer** either at the same or different premise located within the same distribution licensee's area of supply"*

**(... Emphasis Added)**

It is explicitly clear from the above definition that one of the conditions for Group Net Metering is that the surplus energy from a Solar PV plant shall be adjusted against more than one electricity service connections of the same consumer whereas in the present case, the Stakeholder is requesting for adjustment of more than one Solar PV plants' surplus energy against a single service connection issued by the distribution licensee, i.e. at Ujjawal Bhawan which does not fall under the ambit of Group Net Metering definition.

By the order of the Commission

(Neeraj Sati)  
Secretary