

Before

UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

Petition No. 16 of 2020

In the matter of:

Petition seeking increase in ceiling limit of 1 MW applicable to Grid Interactive Rooftop and Small Solar PV Plants to 2 MW under RE Regulations, 2018 for net metering arrangement.

AND

Petition No. 17 of 2020

Petition seeking approval of the Commission for net metering for 2 MW Solar Energy Power Plant at GE Dehradun.

In the matter of:

Military Engineer Services, Roorkee

Military Engineer Services, Dehradun

... Petitioners

AND

In the matter of:

Uttarakhand Power Corporation Ltd. (UPCL)

Uttarakhand Renewable Energy Development Agency (UREDA)

... Respondents

CORAM

Shri D.P. Gairola Member (Law)

Shri M.K.Jain Member (Technical)

Date of Hearing : August 18, 2020

Date of Order : September 17, 2020

The Order relates to the Petition dated 04.03.2020 & Supplementary Petition dated 28.07.2020 filed by Military Engineer Services, Roorkee (hereinafter referred to as "MES,

Roorkee) and Petition dated 05.03.2020 & Supplementary Petition dated 29.07.2020 filed by Military Engineer Services, Dehradun (hereinafter referred to as “MES, Dehradun”) for enhancing the ceiling limit specified for Grid Interactive Rooftop & Small Solar PV plants in RE Regulations, 2018 from 1 MW to 2 MW under NoC model prevalent in the State for SECI developed projects, wherein surplus power in a billing period shall be supplied to UPCL free of cost.

Since the issues raised in the Petitions are similar in nature, the Commission has decided to club the same.

1. Background

- 1.1 Military Engineering Services (MES) is a Non-Profit Organisation under the Ministry of Defence and is responsible for the design, construction and maintenance of all works, buildings, airfields, dock installation etc. of all three services, i.e. Army, Air-Force and Navy and other associated organisations under Ministry of Defence alongwith necessary services such as military roads, bulk water supply, electricity supply etc. It helps to maintain the operational preparedness of Defence Forces.
- 1.2 Ministry of New & Renewable Energy (MNRE), GoI has launched a 300 MW Solar Project Defence Scheme to be implemented by Defence organisation all over the country. Under the said Scheme, 150 MW is allocated to Department of Defence to implement solar projects at various defence locations across the country. MES is implementing agency on behalf of Department of Defence and the Petitioners have been assigned to install 2 MW Solar Power plant each at Dehradun Cantt and Roorkee Cantt.

2. Petitioner’s submissions

- 2.1 The Petitioners vide their main Petitions submitted that they have been assigned to install Solar PV plant having capacity of 2 MW each at Garrison Engineer Dehradun and Roorkee Cantt under 300 MW Solar Projects Defence Scheme. The Petitioners also submitted that MNRE has been promoting new and renewable energy sources in a big way in India. Government of India envisages 14000 MW capacity additions during 11th five-year plan from renewable power generation. While about 10000 MW is expected to be from wind power, the balance is to be met through Solar and other renewable energy system.

- 2.2 The Petitioners requested the Commission to invoke Regulation 51 and Regulation 52 of UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2018 (hereinafter referred to as "RE Regulations, 2018) and allow them to install Solar Power plant having capacity of 2 MW each under net metering taking into cognizance that MES is an institution which provides its services 24x7 and it is a non-profit organisation under the Ministry of Defence and is responsible for the design, construction, and maintenance of all works, buildings etc. alongwith necessary services such as military roads, bulk water supply, electricity supply etc.
- 2.3 In the matter, a hearing was conducted on 26.05.2020 on admissibility of the applications filed by the Petitioners seeking approval of the Commission for development of 2 MW Solar PV plant under net metering arrangement. During the course of hearing, UPCL objected on the request made by the Petitioners as the net metering arrangement was available for the Rooftop and Small Solar PV plants having capacity upto 1 MW only whereas the Petitioners are willing to develop a Solar PV plants having capacity of 2 MW under net metering arrangement which requires PPA to be signed with the distribution licensee. Furthermore, based on the proposal of UREDA, during the hearing, it was mutually agreed that the Petitioners shall file Supplementary Petitions requesting the Commission for connectivity from UPCL under NoC model prevalent in the State of Uttarakhand for SECI developed projects earlier in the State, wherein surplus power in a billing period shall be supplied to UPCL free of cost.
- 2.4 Accordingly, based on the proposal of UREDA, the Petitioners filed Supplementary Petitions requesting the Commission to invoke Regulation 51 and Regulation 52 of RE Regulations, 2018 and allow development of Solar PV plant having capacity of 2 MW under NoC model wherein surplus power shall be supplied to UPCL free of cost within a billing period.

3. Respondents' replies

- 3.1 The Supplementary Petitions filed by the Petitioners were forwarded to the Respondents, i.e. UREDA and UPCL for comments. UREDA and UPCL vide their submission dated 13.08.2020 and 17.08.2020 respectively submitted their comments which has been dealt in

the subsequent Paras of this Order.

- 3.2 UREDA submitted that the Commission may consider to allow the installation of Solar Power Plants on net-metering model beyond 1 MW capacity as a special case and solar energy generated from such plants may be considered for the Renewable Purchase Obligation of UPCL as these plants also contributes in the total solar power generation within the State of Uttarakhand.
- 3.3 UPCL submitted that the Regulations does not prohibit any generator including the Petitioners to establish its plant as normal Solar PV plant. Therefore, the request of the Petitioners that the limit of 1 MW is a bottleneck for the development of solar generation is fundamentally flawed. UPCL referring to the Commission's letter dated 04.01.2018 submitted that such plants can be installed as captive plants because as per prevailing RE Regulations, only a plant having capacity upto 1 MW or 80% of the sanctioned load, whichever is lower, can be installed under net metering arrangement.
- 3.4 UPCL also submitted that if Solar Power Plants having large capacity are allowed to be installed under net metering arrangement, this can result in an intermittent and unpredictable integration of solar power into the grid. Further, DSM Regulations, 2018 exempt RE generators from deviation charges and exempt generators having generation on voltage below 11 kV, i.e. prospective solar rooftop generators even from submission of Day Ahead schedule to UPCL. UPCL submitted that it does not possess any mechanism to specifically access and monitor real time demand of such large number of consumers. Further, quality of power may get affected as various low-grade system integrated to grid are likely to induce non-sinusoidal inputs into the LT system.
- 3.5 UPCL submitted that unrestricted allowance of the Solar Power Plants may lead to non-matching infrastructure which may cause loss to UPCL, viz. damage to distribution equipment etc. Distribution transformers are not designed for reverse power flow. As such the issue of optimisation of solar generation through a particular DTR without damaging it or without having adverse impact on whole distribution network needs to be addressed. Further, such policy initiative of allowing installation of solar rooftop plants on domestic consumers will further increase pressure on present manpower. Furthermore, UPCL is facing problem of high voltage during daytime in hilly area. Due to high voltage,

evacuation of power from solar rooftop power plant is getting affected frequently.

- 3.6 UPCL submitted that it has already planned arrangement of power by signing long term PPAs. If installation of rooftop power plant is opened to such large capacities, it can have adverse impact on grid, demand pattern and power planning of UPCL. Further, while fixing the limit of solar plant upto 1 MW for net metering in RE Regulation, 2018 the Commission has already taken into consideration all the relevant facts viz. grid size, intermittency of solar power etc. and thereafter has considered it proper to fix a limit of 1 MW after conducting detailed study.

4. Commission's Analysis and view

- 4.1 In the main Petitions, the Petitioners had requested the Commission to invoke the provisions of Regulation 51 and Regulation 52 of RE Regulation, 2018 to grant approval for setting up Solar PV plants having capacity of 2 MW each at Roorkee Cantt and Dehradun Cantt under net metering arrangement. The Commission heard the Petitioners and the Respondents in the matter on 26.05.2020. During the course of hearing, UPCL objected on the request made by the Petitioners stating that the net metering arrangement is available for the plants having capacity upto 1 MW only whereas the Petitioners are willing to develop a Solar PV plants having capacity of 2 MW under net metering arrangement which requires PPA to be signed with the distribution licensee. In the matter, during the hearing, UREDA suggested that the aforesaid solar plants can be installed under NoC model prevalent in the State which does not require any PPA. Accordingly, based on the proposal of UREDA, it was mutually agreed that the Petitioners shall file Supplementary Petitions requesting the Commission for connectivity from UPCL under NoC model prevalent in the State of Uttarakhand for SECI developed projects, wherein surplus power in a billing period shall be supplied to UPCL free of cost.
- 4.2 Subsequently, the Supplementary Petitions were filed by MES, Roorkee and MES, Dehradun on 28.07.2020 and 29.07.2020 respectively. The Petitioners vide their Supplementary Petitions requested the Commission to invoke Regulation 51 and Regulation 52 of RE Regulations, 2018 to allow development of Solar PV plant having capacity of 2 MW each under NoC Model wherein surplus power in a billing period shall be injected into UPCL grid free of cost. The supplementary Petitions were forwarded to the

Respondents, i.e. UREDA and UPCL for comments. UREDA and UPCL submitted their comments vide their submissions dated 13.08.2020 and 17.08.2020 respectively. A hearing was conducted on 18.08.2020 in the matter and after hearing the Petitioners and the Respondents, the Commission vide its Order dated 18.08.2020 admitted the Petitions and reserved the judgement in the matter.

- 4.3 In the matter, the Petitioners submitted that MNRE has launched a 300 MW Solar Projects Defence Scheme to be implemented by Defence Organisations and MES has been appointed as Implementing Agency to develop and get necessary permissions with regard to connectivity & evacuation of surplus power for implementing of 150 MW Solar projects out of 300 MW capacity across the country.
- 4.4 It is pertinent to mention that, as the Petitioners have changed their prayers through Supplementary Petitions, the Commission has limited its analysis and scope only upto Supplementary Petitions and comments of the Respondents thereon. The Commission conducted a hearing on the Petitions on 18.08.2020. Both the parties reiterated their submissions before the Commission. The Commission heard both the parties and carefully considered their written submissions. After examining the relevant material available on records, issues raised by the Petitioners/Respondents have been dealt in the subsequent paragraphs of this Order.
- 4.5 With regard to UPCL's objections in the matter, it appears that UPCL has misinterpreted the prayer of the Petitioners and has opposed the request of the Petitioner considering that the Petitions have been filed seeking amendment in the Regulations for increasing the ceiling limit of 1 MW for net metering in general whereas the Petitioners have requested the Commission to consider the representation of the Petitioners as special case and allow them to develop Solar PV plants having capacity of 2 MW under NoC model wherein surplus solar power injected into the grid of UPCL shall be free of cost.
- 4.6 Further, UPCL has expressed its concern regarding issues that may arise due to increase in the ceiling limit w.r.t. RE generation on voltage below 11 kV and plants connected at LT system. Here, it is pertinent to mention that MES, Roorkee and MES, Dehradun are connected at 33 kV line of UPCL and their contracted load is 2960 kW and 3685 kW respectively. Further, MES is not a domestic consumer but having a mixed load connection

from UPCL. Furthermore, UPCL has submitted that such policy initiative of allowing installation of solar rooftop plants on domestic consumers will further increase pressure on existing manpower of UPCL. In the matter, the Commission would like to reiterate that the present Petitions have been filed seeking case specific approval for enhancing the ceiling limit of 1 MW to 2 MW for development of Solar Power Plant under NoC model wherein surplus power in a billing cycle shall be supplied to UPCL free of cost. Besides the provision of installing a plant having capacity upto 80% of the sanctioned load will not be altered as the sanctioned loads of both the connections are around 3 MW and 80% of the same would be 2.40 MW and the capacity to be installed is 2 MW each which is lower than 80% of their sanctioned load.

UPCL submitted that it has already planned arrangement of power by signing long term PPAs. If installation of rooftop power plant is opened to such large capacities, it can have adverse impact on grid, demand pattern and power planning of UPCL. In the matter, the Commission is of the view that the instant case is allowing relaxation only to the MES projects in accordance with the MNRE's OM dated 11.12.2017 wherein the States were advised to make provision of surplus power beyond 1 MW capacity on net metering basis through bi-directional meters and Discoms/transco may be directed to provide necessary support to MES in respect of granting approval for grid connectivity so that solar projects are implemented timely. Besides, this year owing to the Covid Pandemic it is expected that UPCL will be having deficit in solar RPO as commissioning of most of the projects for which PPAs have been signed by UPCL will get delayed. Further, installation of 2 solar projects having capacity of 2 MW each will likely have negligible impact on the grid. Hence, the concern of UPCL is misplaced.

- 4.7 Further, UPCL has referred to the Commission's letter dated 04.01.2018 vide which the Commission while rejecting the prayer of M/s Asahi Glass Ltd. for allowing installation of Solar PV plant having capacity more than specified under prevailing RE Regulations under net metering arrangement suggested that such plants can be established as captive plant. UPCL has submitted that on the same line, the Petitioners can not be allowed to develop Solar PV plants under net metering arrangement and should be advices to develop Captive plants.

In the matter, it is worth mentioning that M/s Asahi Glass Ltd. had requested the

Commission for the net metering arrangement wherein UPCL would have been paid for the surplus power injected into the grid of UPCL whereas in the present case, the Petitioners have requested the Commission to allow connectivity and evacuation for proposed 2 MW capacity Solar PV Plants to be constructed under 300 MW Solar Projects Defence Scheme under NoC model prevalent in the State for SECI developed projects, wherein surplus power in a billing period shall be supplied to UPCL free of cost.

- 4.8 As far as UREDA's comments w.r.t. consideration of solar energy generated from such plant for RPO is concerned, Regulation 9(2) of RE Regulations, 2018 specifies as follows:

"Distribution licensee shall be eligible to utilise the gross Solar energy generated from the rooftop or small solar power plants of non-obligated entities for meeting its Solar RPO compliance based on the gross energy generated meter reading of such rooftop or small solar power plant."

It is explicitly clear from the above regulation that Distribution licensee can utilise the gross solar energy generated from the Rooftop and Small Solar PV plant of non-obligated entities for meeting Solar RPO compliance. The Commission from the various submissions of UPCL regarding projected RPO has observed that solar energy procurement from the preferential tariff shall be only 371.77 MUs against the RPO target of 658.57 MUs for FY 2020-21. Accordingly, solar energy generation from such proposed plants will help UPCL to meet its Solar RPO to some extent.

- 4.9 The Commission has gone through the documents submitted by the Petitioners and observed that as per 300 MW Solar Projects Defence Scheme, MES is required to implement Solar Power plants having cumulative capacity of 150 MW across the country on Defence acquired land/premises. Further, MNRE vide its Office Memorandum, expressed its concern towards the delay in approvals/permissions regarding connectivity and evacuation of surplus power for implementation of 150 MW solar projects by MES under the said scheme. Moreover, the Commission has gone through the load survey data of MES, Roorkee as well as MES, Dehradun for the last one year and observed that during daytime the average load varies in the range of 1.57 MW to 2.12 MW for MES, Roorkee and 0.79 MW to 1.30 MW for MES Dehradun. Further, it is important to mention that MES, Dehradun already has a contracted load of about 3700 kW. Accordingly, with the installation of 2 MW Solar Power Plant, surplus power injected into the grid will not be substantial. Hence, it can be safely assumed that it will not lead to unwanted interruption

of the grid.

With regard to ceiling limit on the capacity of Grid interactive Rooftop and Small Solar PV Plants, Regulation 36(2) specifies as follows:

“(2) Grid Interactive Roof-top and small solar PV plants can be installed for injecting power into the distribution system of a licensee by any Eligible consumer.

Provided that the maximum Rooftop Solar PV and Small Solar PV plants installed capacity at any Eligible Consumer’s premises shall be upto a maximum of 80% of consumer’s sanctioned load/contracted demand;

Provided that in case of Domestic Consumer, such installed capacity of Rooftop and Small Solar PV plants shall be irrespective of consumer’s sanctioned load/contracted demand;

Provided, the maximum installed capacity of Rooftop Solar PV and Small Solar PV plants at the premises of eligible consumer shall not be more than 1 MW.”

As per aforesaid Regulation, a Solar plant having capacity upto 1 MW or 80% of the sanctioned load/contracted demand, whichever is lower, can be installed under net metering arrangement. However, in the present case, the Petitioners referring to 300 MW Solar Projects Defence Scheme and MNRE’s letter, requested to Commission to invoke provisions of Regulation 52 of RE Regulations, 2018 to grid development of Solar PV Plant having capacity of 2 MW each under NoC Model wherein surplus power shall be supplied to UPCL free of cost.

Accordingly, in the present case, taking cognizance of Solar Projects Defence Scheme for development of Solar Power Plant at Defence establishments, MNRE letter and free surplus power supply to UPCL, the Commission in the instant case decides to exercise its power provided under regulation 52, i.e. Power to remove difficulties and Power to relax which is reproduced hereunder:

“ 52. Power to Relax

The Commission, for reasons to be recorded in writing, may vary any of the provisions of these regulations on its own motion or on an application made before it by an interested person.”

Accordingly, the Commission allows MES, Dehradun and MES, Roorkee to establish Solar PV Plants having capacity of 2 MW each in their premises under NoC model wherein surplus power in a billing period shall be supplied to UPCL free of cost and

and the Petitioners are not required to execute a contract for supply of electricity. **However, it is clarified that such decision is case specific and shall not become precedence in other projects.**

4.10 Here, it is pertinent to mention that as the Solar PV Plants are proposed to be installed under NoC model and there is no requirement to execute a PPA, the Petitioners are directed to approach UREDA to obtain Grid Feasibility report from UPCL and permission for net metering. Further, UREDA and UPCL are required to provide hands on support to the Petitioners for the connectivity of the proposed Solar Power Plants.

4.11 Ordered accordingly.

(M.K. Jain)
Member (Technical)

(D.P. Gairola)
Member (Law)