

Before

UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

In the matter of:

Application seeking approval of the Commission on the Model Power Purchase Agreement between Uttarakhand Power Corporation Limited and Grid Interactive Rooftop and Small Solar PV Power Plant.

In the matter of:

Uttarakhand Power Corporation Ltd. ... Petitioner

AND

In the matter of:

Uttarakhand Renewable Energy Development Agency (UREDA) ... Respondent

CORAM

Shri Subhash Kumar Chairman

Shri K.P. Singh Member

Date of Hearing: August 2, 2016

Date of Order: September 8, 2016

This order relates to the Petition filed by Uttarakhand Power Corporation Ltd. (hereinafter referred to as "UPCL" or "Petitioner" or "Licensee") seeking approval of the Model Power Purchase Agreement (Single Party Model and Third Party Model) to be executed by it with project developers for procurement of power from Grid Interactive Rooftop & Small Solar PV Plant.

1. Petitioner's Submissions

1.1. UPCL had filed the Petition seeking approval of the Commission on the Model Power Purchase Agreement for purchase of energy generated from the Respondent's Rooftop and Small Solar PV Plant under Section 86(1)(b) of the Electricity Act, 2003, Regulation 74(1) and Regulation 104 of UERC (Terms and Conditions for Determination of Multi Year Tariff) Regulations, 2015.

- 1.2. The Commission vide its letter no. UERC/6/TF-308/16-17/2016/451 dated 16.06.2016, had directed the Petitioner to get the Model PPA approved by the Commission for procurement of power from small solar plants being setup in the State in accordance with the GoU Policy and also submit the details of such plants.
- 1.3. With respect to the details of the plants being setup in the State in accordance with the GoU Policy, the Petitioner submitted that UREDA, the designated Nodal Agency of GoU for RE Power arrangements, over the period of time has allotted the solar projects under different schemes to different generators and it is an ongoing process, hence, providing the list of upcoming projects at any point of time is not feasible though the same will always be provided to the Commission at the time, UPCL will file the petition for approval of the PPA's signed with the respective generators.
- 1.4. Accordingly, the Petitioner filed the application dated 14.07.2016 seeking approval on the Model PPAs for Single Party Model and Third Party Model, to be executed between UPCL and the Grid Interactive Rooftop and Small Solar PV Power Plants.
- 1.5. The Petitioner also requested the Commission to relax the condition for prior approval of every agreement for procurement of power from Grid Interactive Rooftop and Small Solar PV Power Plant.
- 1.6. The Petition was heard on 02.08.2016 and the Commission vide its daily Order dated 02.08.2016, sought comments from UREDA on the Model PPAs between UPCL and Grid Interactive & Small Solar PV Plants.

2. Respondent's submission

- 2.1. UREDA vide its letter dated 09.08.2016 submitted the following comments on the Model PPAs:
 - a. With respect to Clause 5.2 of both the Model PPAs, UREDA submitted that it should be read as:

"a. Concerned Division, UPCL shall make full payment against such Bills as per RE Regulations 2013 of Uttarakhand Electricity Regulatory Commission, from the date of the issuance/raising of original bill with complete documents."
 - b. With respect to clause 6.1 of the both the Model PPAs, UREDA submitted that it should be read as:

“Power from Rooftop generators shall be evacuated at different voltage level as per Clause 42 of UERC Regulation 2013 as amended from time to time.”

- c. With respect to the definition of “Inter-connection Point” given at sub-clause (g) under Clause 3 in the Third Party Model, UREDA submitted that it should be read as:
“Inter-connection shall mean interface point of renewable energy generating facility with the transmission system or distribution system”

3. Commission’s Views & Decisions

3.1. Legal Requirement for approval of PPA

- 3.1.1. A PPA is a legal document incorporating operational, technical & commercial provisions to be complied in accordance with the relevant rules & regulations.
- 3.1.2. Section 86(1)(b) of the Electricity Act, 2003 stipulates that one of the function of the Commission is to regulate electricity purchase and procurement process of the distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State.
- 3.1.3. Further, the Distribution and Retail Supply License issued by the Commission lays down certain conditions of license, which amongst others also has the following:

“5.1 The Licensee shall be entitled to:

(a) ...

(b) Purchase, import or otherwise acquire electricity from any generating company or any other person under Power Purchase Agreements or procurement process approved by the Commission; ...”

(Emphasis added)

- 3.1.4. Further, Regulations 7(2) & 7(3) of both the UERC (Tariff and other Terms for Supply of Electricity from Non-Conventional and Renewable Energy Sources) Regulations, 2013 (RE Regulations, 2013) specifies that:

“(2) The distribution licensee on an offer made by the said RE based Generating Stations and Co-generating Stations shall enter into a power purchase agreement in conformity with these Regulations and relevant provisions of other Regulations and the Act. The distribution licensee shall sign the PPA within two months of offer made by the generating company,

failing which the generating company may approach the Commission for suitable remedy.

(3) The distribution licensee shall make an application for approval of power purchase agreement entered into with the generating station in such form and manner as specified in these regulations and Uttarakhand Electricity Regulatory Commission (Conduct of Business) Regulations, 2004 as amended from time to time."

(Emphasis added)

3.1.5. Accordingly, in accordance with the requirements of the Act and Regulations referred above, UPCL as a distribution licensee was required to seek approval of the PPAs entered or proposed to be entered by it from the Commission.

3.2. Consistency of the PPA with the Regulations

3.2.1. Regulation 6(7) of RE Regulations, 2013 specifies as under:

"Except as provided in the Second Proviso to sub-Regulation (1) of Regulation 2 above, all Power Purchase Agreements signed by the generating stations existing on the date of notification of these regulations shall be amended in accordance with these regulations, if inconsistent with these Regulations and such amended PPAs shall be valid for entire life of the RE Based Generating Stations and Co-generating Stations."

3.2.2. Hence, all the Model/draft PPAs to be entered into by UPCL are required to be amended in accordance with RE Regulations if they are inconsistent with the provisions of RE Regulations, 2013. Accordingly, PPAs proposed to be executed between UPCL and the generators are examined for consistency and conformity with the relevant provisions of the Electricity Act, 2003 & RE Regulations, 2013.

3.3. Commission's Analysis of the Model PPAs and Order on the same

3.3.1. The Model PPAs submitted by UPCL have been examined in light of the relevant rules & Regulations. The Commission observed that certain clauses in the Model PPAs submitted by UPCL are inconsistent with the provisions of the Act/Regulations. Such observations have been discussed in the subsequent paragraphs. UPCL is required to take note of the same and incorporate necessary corrections in the PPAs entered into or proposed to be entered into between UPCL and generators.

3.3.2. Further, the Model PPAs submitted by UPCL are proposed to be executed with Grid

Interactive Rooftop & Small Solar PV Plants under Single Party Model and also under Third Party Model. Accordingly, the analysis & decision on these Model PPAs have been discussed in two parts, i.e. first part is for the PPAs to be executed under Single Party Model and second one is for the PPAs to be executed under Third Party Model.

3.3.3. Observations on the Model PPA under Single Party Model:

- a) Sub-clause (g) of Clause 1.1 of the Model PPA provides definition of the interconnection point as follows:

““Inter-connection Point” shall mean interface point of renewable energy generating facility with the transmission system or distribution system.”

However, vide notification on Fifth Amendment to the RE Regulations, 2013 dated 29.04.2016, the definition of Inter-connection Point has been modified as follows:

“(v) “Inter-connection Point” in respect of all the RE based generating stations, except Grid interactive Roof Top and Small Solar PV Power Projects, shall mean interface point of renewable energy generating facility with the transmission system or distribution system which shall be line isolator on outgoing feeder on HV side of generator transformer;

However, in respect of Grid interactive Roof Top and Small Solar PV Power Projects, Inter-connection Point shall mean the interface of solar power generation facility under net metering arrangement with the network of licensee and shall normally be the point where export/import meter is installed to measure the energy transfer between the licensee and the eligible consumer;.”

Accordingly, the definition given under Clause 1.1 (g) is required to be replaced with the above mentioned definition.

- b) Clause 3.1 of the Model PPA provides that Rooftop & Small Solar PV Plant shall supply two identical sets of meters whereas Regulation 42(3) of the RE Regulations, 2013 read with third amendment to the said Regulations specifies that the energy supplied by the plant can be measured either by two separate meters or alternatively by an export-import type meter as reproduced below:

“(3)Supply of electricity to the consumer(s) from the licensee’s sources and that to the

licensee's distribution system from the roof-top Solar PV sources shall be measured either by two separate meters, the readings of which shall be used in each billing period for settlement on net basis or alternatively by an export-import type meter suitable for directly measuring the net exchange."

In view of the above provision of the Regulations, the Rooftop & Small Solar PV Plant can opt to install either two separate meters or one single export import meter suitable for directly measuring the net exchange of power. Accordingly, the Petitioner is required to make necessary corrections, if required, in Clause 3.1 of the Model PPA prior to execution of the PPA based on the option chosen by the generator.

c) Sub-clause (a) of Clause 5.2 of the Model PPA provides that

*"UPCL shall make full payment against such Bills as per RE Regulation 2013 to Uttarakhand Electricity Regulatory Commission, from the date of the issuance/raising of original bill with complete documents with following rebate options:-
..."*

The above said provision of the Model PPA is incorrect and it should be read as follows:

*"UPCL shall make full payment against such Bills as per RE Regulation 2013 to ..(name of the Owner) from the date of the issuance/raising of original bill with complete documents with following rebate options:-
..."*

d) Clause 5.2 of the Model PPA provides for payments/rebate on energy bills. UREDA has submitted that there should be no clause for rebate. The Commission is of the view that provision of rebate in Clause 5.2 of the Model PPA is in accordance with the Regulations, hence, UREDA's proposal is not tenable.

e) Clause 6.1 of the Model PPA provides that:

"Power from the Rooftop generator shall be evacuated at 11 kV voltage and connected to nearest feasible LT/HT line of UPCL as per Clause 42 of UERC Regulation 2013 as amended from time to time."

In respect of Clause 6.1, UREDA has proposed to replace the said clause with *"Power from Rooftop generator shall be evacuated at different voltage level as per Clause*

42 of UERC Regulation 2013 as amended from time to time."

In this regard, regulation 42(1) of the RE Regulations, 2013 provides that:

"(1) Roof-top Solar PV sources shall be allowed connectivity at the following voltage level in the distribution system of the licensee:

(i) Load upto 4 kW: low voltage single phase supply.

(ii) Load >4 kW and upto 75 kW: low voltage three phase supply.

(iii) Load >75 kW and upto 500 kW: at 11 kV."

Since the size of the Grid Interactive Rooftop & Small Solar PV Plant may vary based on the capacity allocated to the generator, hence, evacuation of power generated from such plant cannot be fixed at 11 kV voltage level as included in the Model PPA. Accordingly, the Commission is of the view that the above mentioned Clause is required to be amended as proposed by UREDA.

3.3.4. Observation of the Model PPA under Third Party Model:

a) Fourth Para of preamble of the Model PPA provides that:

"And WHEREAS the Uttarakhand Electricity Regulatory Commission, herein after referred to as the Commission or UERC, has notified UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2013, herein after referred to as RE Regulations, 2013 on 15.04.2013 as amendment from time to time and has also ordered the interconnection, applicable tariff, billing cycle etc for the same vide its order dated 23/07/2015;"

The reference made to the Commission's Order dated 23.07.2015 as above is incorrect since the Commission had vide its Order dated 23.07.2015 approved the revised benchmark cost of Solar based projects and corresponding tariffs in accordance with the regulations for FY 2015-16 only. Accordingly, UPCL is required to replace the Para with the following:

"And WHEREAS the Uttarakhand Electricity Regulatory Commission, herein after referred to as the Commission or UERC, has notified UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2013, herein after referred to as RE Regulations, 2013 on 15.04.2013 as amendment from time to time;"

- b) Sub-clause (g) of Clause 1.1 of the Model PPA provides definition of the interconnection point as follows:

““Inter-connection Point” shall mean interface point of renewable energy generating facility with the transmission system or distribution system.”

However, vide notification on Fifth Amendment to the RE Regulations, 2013 dated 29.04.2016, the definition of Inter-connection Point has been modified as follows:

“(v) “Inter-connection Point” in respect of all the RE based generating stations, except Grid interactive Roof Top and Small Solar PV Power Projects, shall mean interface point of renewable energy generating facility with the transmission system or distribution system which shall be line isolator on outgoing feeder on HV side of generator transformer;

However, in respect of Grid interactive Roof Top and Small Solar PV Power Projects, Inter-connection Point shall mean the interface of solar power generation facility under net metering arrangement with the network of licensee and shall normally be the point where export/import meter is installed to measure the energy transfer between the licensee and the eligible consumer;.”

Accordingly, the definition given under Clause 1.1 (g) is required to be replaced with the above mentioned definition.

- c) RE Regulations, 2013, read with third amendment thereof, provides definition of “Third Party” as follows:

“Third party owner” means a developer who generates solar energy from its plant established in the Premises of Eligible Consumer, and who has entered into a lease/commercial agreement with such Eligible Consumer;”

Model PPA does not provide the above referred definition, accordingly, the Petitioner is required to incorporate the same.

- d) Clause 3.1 of the Model PPA provides that Rooftop & Small Solar PV Plant shall supply one/two identical sets of meters and Regulation 42(3) of the RE Regulations, 2013 read with third amendment to the said regulations specifies that the energy supplied by the plant can be measured either by two separate meters or alternatively by an export-import type meter as reproduced below:

“(3)Supply of electricity to the consumer(s) from the licensee’s sources and that to the licensee’s distribution system from the roof-top Solar PV sources shall be measured either by two separate meters, the readings of which shall be used in each billing period for settlement on net basis or alternatively by an export-import type meter suitable for directly measuring the net exchange.”

In view of the above provision of the regulations, the Rooftop & Small Solar PV Plant can opt to install either two separate meters or one single export import meter suitable for directly measuring the net exchange of power. Accordingly, the Petitioner is required to make necessary corrections, if required, in Clause 3.1 of the Model PPA prior to execution of the PPA based on the option exercised by the generator.

e) Clause 3.2 of the Model PPA provides that:

“The Third Party Owner shall bear the cost of installing new/additional meter/metering system. Further the cost of check meter is born by UPCL.”

In line with the Model PPA for the single party (owner), the above mentioned Clause is required to be modified as follows:

“ Check Meter and related equipments (if required) can also be procured by such plant owner, however, the cost of Check Meter shall be refunded by the licensee to such plant owner as per UPCL’s stock issue rate for the relevant period or the cost of check meter whichever is lower.”

f) Clause 3.13 & 3.14 of the Draft PPA provides the metering arrangement at generator terminal unit and other parameters to be in accordance with “CEA (Installation and Operation of Meters) Regulations, 2010” however, title of the CEA regulations included in the draft PPA is incorrect and should, therefore, be substituted with “CEA (Installation and Operation of Meters) Regulations, 2006 as amended from time to time.”

g) Clause 4.1 of the Draft PPA provides that UPCL shall prepare bill for net electricity purchased by Rooftop & Small Solar PV Plant executed under Third Party Model from UPCL or net electricity supplied by such Third Party Owner to UPCL. In this regard, billing of energy supplied from such plants shall be strictly in accordance with sub-regulations (2), (3), (4) & (5) of Regulation 35 of the RE

Regulations, 2013 read with third amendment thereof. Hence, necessary correction is required to be incorporated in said clause 4.1 of Draft PPA.

- h) In respect of Clause 5.2 of the draft PPA, UREDA has submitted that there should be no clause for rebate. The Commission is bound by its Regulations. Further, said clause of the draft PPA is as per Regulations. Accordingly, proposal of the UREDA is not tenable.
- i) Clause 6.1 of the Model PPA provides that:

“Power from the Rooftop generator shall be evacuated at 11 kV voltage and connected to nearest feasible LT/HT line of UPCL as per Clause 42 of UERC Regulation 2013 as amended from time to time.”

In respect of Clause 6.1, UREDA has proposed to replace the said clause with *“Power from Rooftop generator shall be evacuated at different voltage level as per Clause 42 of UERC Regulation 2013 as amended from time to time.”*

In this regard, regulation 42(1) of the RE Regulations, 2013 provides that:

“(1) Roof-top Solar PV sources shall be allowed connectivity at the following voltage level in the distribution system of the licensee:

- (i) Load upto 4 kW: low voltage single phase supply.*
- (ii) Load >4 kW and upto 75 kW: low voltage three phase supply.*
- (iii) Load >75 kW and upto 500 kW: at 11 kV.”*

Since the size of the Grid Interactive Rooftop & Small Solar PV Plant may vary based on the capacity allocated to the generator, hence, evacuation of power generated from such plant cannot be fixed at 11 kV as proposed in the Model PPA. Accordingly, the Commission is of the view that the above mentioned Clause is required to be amended as proposed by UREDA.

- j) Clause 6.7 of the Draft PPA provides that Rooftop & Small Solar PV Plant shall operate and maintain the interconnection and parallel operation facility in accordance with accepted good engineering practices in the electricity industry and the SGC as amended from time to time. In this regard, the Commission is of the view that CEA (Grid Standards) Regulations, 2010, CEA (Measures relating to Safety and Electricity Supply) Regulations, 2010, CEA (Safety requirements for

construction, operation and maintenance of electrical plants and electric lines) Regulations 2011 & CEA (Technical Standard for Connectivity in the Grid) Regulations, 2007 read with amendments issued from time to time, are in place for construction, connectivity and safety aspects. Hence, licensee should ensure including said regulations in the Draft PPA.

- k) Further, sub-regulation 42(2) of the RE Regulations, 2013 read with third amendment thereof provides that:

(2)“In the interconnection of roof top PV solar energy generator with the local distribution licensee’s grid, the relevant provisions of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 as amended from time to time shall apply.”

Interconnection facility mentioned at Clause 6 of the PPAs should be in accordance with the above mentioned CEA Regulations, 2010 and the same should also be specified in said Clause of the PPAs.

- l) Clause 7.2 of the PPAs requires that Rooftop & Small Solar PV Plant should obtain prior approval of licensee in respect of protection scheme. However, no timeline for the same has been provided in the said Clause. In this regard, UPCL is required to provide a procedure including definite time line with mutual consent of the parties for grant of said approval.

4. UPCL has also requested for relaxing the condition of prior approval of every agreement for procurement of power for Grid Interactive Rooftop and Small Solar PV Power Plant. In this regard, the Commission is of the view that the PPAs with such plants shall be executed under schemes notified by the Central/State Government for certain capacities allocated from time to time for the State, primarily for compliances of Solar-RPOs in accordance with the regulations, having individual capacities upto 500 kW. For instance initially, a scheme for installation of 5 MW & 2 MW Grid Interactive Rooftop and Small Solar PV Power Plant was approved by MNRE vide its sanction letters dated 31.12.2013 & 09.03.2016 respectively for the Uttarakhand State. Thereafter, MNRE vide its sanction letter dated 09.08.2016 again allocated 10 MW capacity for installation of Grid Interactive Rooftop and Small Solar PV Power Plants. UREDA, based on the capacities sanctioned

by MNRE, allocated the projects to the project developers under various schemes. Hence, by approving Model PPAs for the capacities allocated by the government, prior approval of PPAs shall not be required for such plants only. **However, the Petitioner is required to submit details of all PPA's for such plants as also directed by the Commission's letter dated 16.06.2016 in the matter.**

5. UPCL is directed to amend the Model PPA in accordance with the observations of the Commission in this Order and sign PPA with the developers after incorporating the same.
6. Ordered accordingly.

(K.P. Singh)
Member

(Subhash Kumar)
Chairman