

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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Case No. 33 of 2019

Case of Maharashtra State Electricity Distribution Co. Ltd. for consideration of Deemed Generation on account of installation of Off-Grid Solar pump under various Solar agriculture pump Scheme towards RPO fulfilment under section 86 of the Electricity Act 2003.

Coram

I.M. Bohari, Member
Mukesh Khullar, Member

Maharashtra State Electricity Distribution Company Limited Petitioner
Maharashtra Energy Development Agency (MEDA) Impleaded Respondent

Appearance

For Petitioner : Smt. Kavita Gharat (Rep.)
For Impleaded Respondent : None

ORDER

Date: 19 March, 2019

1. Maharashtra State Electricity Distribution Co. Ltd (**MSEDCL**), has filed a Petition on 5 February, 2019 seeking consideration of deemed Generation on account of installation of Off-Grid solar pump under various Solar Agriculture (**Ag**) pump scheme towards RPO fulfilment.
2. **MSEDCL's main prayers are as follows:**
 - a) *To admit the Petition as per the provision of the Regulation 18 and 19 of MERC (RPO, Its Compliance and Implementation of REC Framework) Regulations, 2016.*
 - b) *To consider power generated from Off-Grid Solar Pumps as the deemed renewable generation and to consider it for the RPO fulfillment of MSEDCL.*
 - c) *To consider the submission made by the Petitioner and consider the same positively while deciding the Petition as well as for further actions;*

3. MSEDCL in its Petition has stated as follows:

- 3.1 MSEDCL has installed 5,700 nos. of Solar Ag Pumps under ATAL Solar Agriculture Pump Project. This scheme has a web portal supported reading and monitoring of the pump functioning. The Government of Maharashtra (**GoM**) has decided to energise 2,24,785 numbers of Ag paid pending connections as on 31 March, 2018 through High Voltage Distribution System (**HVDS**). As per HVDS Scheme, if the cost of Ag Pump on HVDS exceeds Rs. 2.5 Lakh, the connection of the pump will be either kept on hold till another connection comes nearby so that cost per pump is reduced else the connection could be released by installing off-grid Solar system.
- 3.2 Mukhyamantri Saour Krishi Pump Yojana has been declared by GoM vide GR dated 15 November, 2018 with the objective of day time irrigation facility to the farmers in the State. In this scheme, 1 lakh off-grid solar pumps are to be installed in phased manner. MSEDCL will install 3HP/5HP DC submersible pumps. Further vide GR dated 1 January, 2019, the GoM has amended the above said GR and mentioned that the solar energy from these schemes shall be eligible for RPO fulfilment of MSEDCL.
- 3.3 The main features of the scheme are as below:
 - a. Eligibility : Existing paid pending applicants (prior to March-2018), where cost of infrastructure by HVDS Scheme is more than Rs. 2.5 lakh. All paid pending applications after 31.03.2018 and new applications for Ag pump.
 - b. Application Procedure: Online application through full-fledged web portal to be developed for the solar pump scheme.
 - c. Provision of Remote monitoring
 - d. The selected bidder shall establish minimum one call centre for providing timely services to the beneficiaries.
 - e. Under this standalone lighting system comprising 2 LED bulbs, 1 USB port for mobile charging, one DC Fan and socket for battery charging will also be provided.
- 3.4 Benefits of off grid solar pumps are as below:
 - a. Day time availability of electricity.
 - b. Reduction in distribution losses.
 - c. Reduction in electrical accidents.

- d. Improvement in quality and reliability of power supply to Ag consumers thus improving consumer satisfaction leading ultimately to increase in the revenue of the Company.
- e. Reduction in Distribution Transformer failure.
- f. Reduction of cross-subsidy burden of MSEDCL consumers.
- g. Promotion of green and environmentally benign energy.

3.5 For implementation of Atal Saur Krishi Pump Yojana in the State, the GoM has planned to provide 1,00,000 Solar agricultural pump to the Agricultural paid pending applicants in the next 3 years in the phased manner, under Mukhyamantri Saur Krishi Pump Yojana. Accordingly, MSEDCL has floated two tenders for providing 50,000 and 25,000 solar pumps for the first and the second phase. Both the tenders are under process.

3.6 Estimated Generation:

It is expected that annual generation from the off-grid pump considering 17.5 % CUF will be as below:

- a. For a solar AG pump of capacity 3000Wp:
 Estimated annual generation= 3000 Wp X 0.175(CUF) X 365 (days) X 24 (hrs)
 = 4599 units per annum.
- b. For a solar AG pump of capacity 4800 Wp:
 Estimated annual generation= 4800 Wp X 0.175(CUF) X 365 (days) X 24 (hrs)
 = 7358 units per annum.

Total estimated annual generation from these 75,000 solar Ag pumps will be around 440 MU.

3.7 Regulatory Provisions:

- i) Regulation 4.2 and 7.2 of the MERC (Renewable Purchase Obligation, its Compliance and Implementation of Renewable Energy Certificate Framework) Regulations, 2016 provides that:

“ 4.2 *The eligible RE sources shall include without limitation the following :*

.....

(f) Solar Power

.....

7.2 An Obligated Entity may meet its RPO target by way of its own generation or procurement of power from another RE Project or by purchase from a Licensee or by purchase of RECs or by a combination of these options: ... ”

3.8 Haryana Electricity Regulatory Commission in its Order in the matter of Maruti

Suzuki India Limited, New Delhi in Case No. HERC/PRO-19 of 2015 dated 14 December, 2016 has ruled that the grid connectivity is not essential for adjustment of RPO. Further, the Commission has ruled as under:

“...Thus, a self certification, based on generation data emanating from the meter installed at the solar power generator’s end shall suffice for availing the benefit of adjustment of Solar RPO by way of self generation...”

- 3.9 Estimated generation from these solar pumps is the own generation of MSEDCL and hence in line with above Regulations and in accordance with the clause 8 of the GoM GR dated 01.01.2019, MSEDCL requests the Commission to consider the power generated from these Off-Grid Solar Pumps for RPO fulfillment of MSEDCL. MSEDCL also request to allow similar dispensation for any future scheme of similar nature.
4. At the hearing held on 13 March, 2019, the representative of MSEDCL reiterated its submission as made in its Petition. The Commission enquired whether the applicants are consumers of MSEDCL and their generation data will be metered. In its reply, MSEDCL stated that these are existing paid pending applicants (prior and after March, 2018) and new applicants for Ag pumps. Remote monitoring arrangement with Water Discharge Reading & Recording Facility will be provided by MSEDCL.
- 5. MSEDCL in its additional submission has stated as follows:**
- 5.1 The GoM vide GR dated 27 March, 2015 decided to provide 7540 off-grid solar pumps under the scheme called solar krishi pump Yojana (which later named as “Atal saur krishi Pump Yojana”) with the objective of provisioning day time irrigation facility to the farmers.
- 5.2 Under this scheme, 30% Central Govt grant, 5 % State Government Grant, 5% from beneficiary and rest 60 % fund are raised by MSEDCL by taking Loans. Therefore 65% funds are being provided by either GoM or by MSEDCL
- 5.3 Whereas in “Mukhyamantri Saour Krishi Pump Yojana” notified vide GR dated 1 January, 2019, beneficiary shall bear 10% of pump cost for general category and 5 % of pump cost for SC/ST category. Remaining money will be provided by Govt. of Maharashtra, who is 100% owner of MSEDCL.
- 5.4 Currently, the electricity generated by solar pumps under this scheme is being recorded and maintained on the Web Portal created by MSEDCL.
- 5.5 The GoM has decided to energise all Ag paid pending connections as on 31 March, 2018 through HVDS. If the cost of AG pump on HVDS exceeds Rs. 2.5 Lakhs, the connections of the pump will be released by installing off-grid Solar system. Thus,

the supplies to these paid pending Ag pump applicants are to be treated as the supply through self-solar generation of MSEDCL.

Commission's Analysis and Rulings

6. MSEDCL under the instant Petition has sought approval for considering electricity generated by Off-Grid solar pump installed under various solar AG pump Schemes as deemed generation for fulfilment of its solar RPO targets.
7. The Commission notes that GoM vide its GR dated 15 November, 2018 has declared the "*Mukhyamantri Saour Krishi Pump Yojana*" with the objective of providing Solar power for day time irrigation. Under this scheme, 1 lakh off-grid solar pumps are to be installed in phased manner. The GoM has appointed MSEDCL as implementation agency. Further, MSEDCL is responsible for inspection of equipment at manufacturer's work as per technical specification, quality control, inspection after installation etc. Under this scheme 3HP/5HP DC submersible pumps will be installed. GoM in its Resolution dated 1 January, 2019 has mentioned that the generation from these off-grid Solar pump shall be qualified for fulfilment of MSEDCL's RPO obligation.
8. MSEDCL in its additional submission dated 14 March, 2019 has stated that Atal saour krishi Pump Yojana declared by GoM also includes installation of 7540 off-grid solar pumps. Under this scheme 30% of the cost of pump is provided from Central Govt grant, 5 % from State Government Grant, 5% from beneficiary and rest 60 % fund are raised by MSEDCL by taking Loans. Therefore 65% funds are being provided either by the GoM or by the MSEDCL.
9. The Commission notes that MSEDCL has floated two tenders for providing 50,000 and 25,000 solar pumps for first and second phase respectively. Both these tenders are under process. MSEDCL has stated that from these 75000 off-grid solar pump about 440 MUs will be generated per annum.
10. The Commission notes that obligated entities like MSEDCL can fulfil its RPO from the eligible sources mentioned in MERC RPO Regulations, 2015. Relevant part of the Regulations is reproduced below:

" 4.2 The eligible RE sources shall include without limitation the following :

...

(f) Solar Power

Provided that generation from grid-connected RE sources with installed capacity of 250 kW and above, or such other minimum capacity as may be specified by the Central Commission from time to time, shall be considered as generation from eligible RE sources;

Provided further that the generation from grid-connected RE sources with installed capacity below 250 kW, or such other minimum capacity as may be specified by the State Commission from time to time, shall be considered as 'eligible RE source' provided suitable metering and communication arrangements with the Maharashtra State Load Despatch Centre ("MSLDC") is established by the concerned RE Project;

11. Although 'Solar' is the eligible RE source for fulfilling RPO, above Regulations also mandate grid connectivity of such eligible RE source. Such mandatory requirement of Grid connectivity is for exact accounting of energy generated from such RE sources which can be used for verification of RPO compliance or issuance of RECs. In the present case, off-grid Solar pumps are not connected to the grid but the pumps are having provision for online monitoring mechanism whereby details of electricity generated and water utilisation by solar pump are automatically made available to MSEDCL. Therefore, correct accounting of energy generated by off-grid Ag Solar pumps can be maintained which can be used later for verification of RPO compliance. For maintaining transparent energy accounting of energy generated from such off-grid Solar AG pumps, MSEDCL shall provide access of online monitoring System to Maharashtra Energy Development Agency (MEDA), which is State Agency for monitoring of RPO of obligated entities.

12. Further, as per RPO Regulations, 2016, obligated entity can fulfill its RPO by way of its own generation or procurement of power from another RE Project or by purchase from a Licensee or by purchase of RECs or by a combination of these options. Relevant part of the Regulations are reproduced below:

"7.2. An Obligated Entity may meet its RPO target by way of its own generation or procurement of power from another RE Project or by purchase from a Licensee or by purchase of RECs or by a combination of these options:

13. In the instant case, MSEDCL has stated that solar energy generated by off-grid Solar pumps provided under 'Atal saour krishi Pump Yojana' and 'Mukhyamantri Saour Krishi Pump Yojana' should be treated as its own generation. The Commission notes that off-grid Solar pumps are to be given to the existing pending or new applicant, if Grid connection to such applicant (through HVDS) is costing more than Rs. 2.50 Lakh. Thus, by providing off-grid Solar pumps to applicants, MSEDCL is fulfilling its USO stipulated under the Electricity Act, 2003. Further, under 'Atal Saour Krishi Pump Yojana', MSEDCL and the GoM is contributing 60% and 5% of the capital cost. Whereas under 'Mukhyamantri Saour Krishi Pump Yojana', the contribution of the GoM is around 90 to 95% and balance is being born by the consumers. Under this scheme, MSEDCL has to provide continuous administrative support such as repairs through selected agency etc. to such off-grid Solar pumps. Contribution of the GoM under these schemes can be treated as direct subsidy under Section 65 of the Electricity Act, 2003. Therefore, the

Commission is of the opinion that solar energy generated by off-grid Solar pumps can be treated as self generation of MSEDCL.

14. As agriculture consumers are not obligated entity under MERC RPO Regulations, allowing MSEDCL to use solar energy generated by off-grid Solar pumps for meeting its RPO obligation will also be consistent with approach taken in Net-metering Regulations wherein Solar energy generated by Rooftop PV of the non-obligated consumer is allowed to be use for meeting RPO of Distribution Licensee.
15. In view of the foregoing, the Commission in exercise of its powers under Regulation 19 “Power to remove difficulties” of RPO Regulations, 2016 deems it appropriate to allow MSEDCL to consider solar energy generation from the Off-Grid Solar pumps for fulfilment of its solar RPO targets. However, MSEDCL shall provide access of its System of online monitoring of off-grid Solar pumps to MEDA for verification and accounting of solar energy generation. This dispensation is also applicable to all similar schemes of off-grid Solar pump which may be envisaged in future.
16. Hence, the following Order:

ORDER

1. **The Case No. 33 of 2019 is allowed.**
2. **MSEDCL is allowed to consider solar generation from the Off-Grid Solar pumps for fulfilment of its solar RPO targets.**
3. **MSEDCL shall provide access of its System of online monitoring of off-grid Solar pumps to MEDA for verification and accounting of solar energy generation.**

Sd/-
(Mukesh Khullar)
Member

Sd/-
(I.M. Bohari)
Member


(Abhijit Deshpande)
Secretary

