

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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Case No. 199 of 2020

Case of R.B Diversified Pvt. Ltd for adjudication of disputes regarding applicability of the Distribution Open Access Regulations, 2016 and Grid Interactive Rooftop Renewable Energy Generating Systems Regulations, 2019 qua Captive Rooftop Solar Power Plants

R.B Diversified Pvt. Ltd
Asahi India Glass Ltd.

..... Petitioner
..... Impleaded Petitioner

Maharashtra State Electricity Distribution Co. Ltd.

..... Respondent

Coram
I.M. Bohari, Member
Mukesh Khullar, Member

Appearance

For the
Petitioner
Impleaded Petitioner

}

: Smt. Deepa Chawan (Adv.)

For the Respondent

: Sh. Ashish Singh (Adv.)

ORDER

Date: 13 February, 2021

1. R.B Diversified Pvt. Ltd. (**RBDPL**) had initially filed this Petition on 9 October 2020, thereafter on 11 January 2021, it amended its Petition and filed the same under Section 86 (1) (e), 86 (1) (f) and 23 of the Electricity Act, 2003 for adjudication of disputes between the parties regarding applicability of Maharashtra Electricity Regulatory Commission

(Distribution Open Access) Regulations, 2016 (**DOA Regulations 2016**) and Maharashtra Electricity Regulatory Commission (Grid Interactive Rooftop Renewable Energy Generating Systems) Regulations, 2019 (**GIRREGS Regulations 2019**) qua captive solar rooftop power plants.

2. RBDPL's main prayers as amended on 11 January 2021 are as follows:

- a) Issue necessary directions, pursuant to Section 23 of the Electricity Act, 2003, clarifying the criterion for non-applicability of the 2016 Regulations qua a captive rooftop solar PV is operating of the rooftop solar plant in a stand-alone manner and isolated from the grid and the connectivity of the premises to the grid is of no relevance to the same;*
- b) Hold/ declare that the 2016 Regulations would not be applicable to a captive renewable energy system being operated on a premise that is otherwise connected to the MSEDCL grid as long as the captive renewable energy system is stand alone and isolated from the MSEDCL grid.*

3. RBDPL in its Case has stated as follows:

- 3.1. RBDPL has financed/invested in a 1000 kW captive rooftop solar power plant set up at the property of Asahi India Glass Limited (AIGL) located at Taloja, Mumbai. The said Solar Power Plant is established, commissioned, and operated by Cleanmax Cogen Solutions Pvt. Ltd. (CMCSL), a company engaged in the business of establishing, commissioning, operating and managing roof top solar power plants in various parts of the country.
- 3.2. AIGL is a consumer of Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL) with contract demand of 8600 kVA and connected at 100 kV with a connected load of 23006 kVA. It is also availing open access of 3000 kVA from a conventional source under group captive arrangement since February 2017.
- 3.3. AIGL entered into a PPA on 18 April 2015 with CMCSL for procurement of electricity from the 1000 kW Solar Power Plant set up by CMCSL at the rooftop of its property. The capital expenditure was provided by RBDPL. It was agreed that in lieu of the investment made by RBDPL, it would receive a monthly tariff from AIGL under the PPA.
- 3.4. AIGL intends to convert the solar power plant installed by CMCSL into a dedicated captive rooftop plant for their self-consumption and the plant will not be connected to the grid and 100% electricity generated from the proposed captive rooftop plant will be consumed by AIGL.

- 3.5. The MERC DOA Regulations 2016 govern the provisions relating to grant of open access by the distribution licensee. Regulation 3 of the MERC DOA Regulations (as amended in 2019) deals with the eligibility for open access. However, the said provisions do not deal with a situation wherein an open access consumer intends to set up a dedicated captive roof top solar power plant with 100% electricity generated for self-consumption.
- 3.6. Further, the Regulation 3 of GIRREGS Regulations deals with the scope and applicability of these regulations:

“3. Scope and Applicability

3.1 These Regulations would apply to:

- (a) Net Metering Arrangements;*
- (b) Net Billing Arrangements;*
- (c) Grid Connected Renewable Energy Generating Systems connected behind the Consumer’s meter, who have not opted either for Net Metering Arrangement or Net Billing Arrangement.*

3.2 These Regulations shall be applicable to all Grid Interactive installations for which Applications are received on or after the notification of these Regulations.”

- 3.7. Regulation 7 of the MERC GIRREGS Regulations deals with inter-connection of the RE generating systems with the distribution network / grid, and its standards and safety. The relevant extracts of Regulation 7 of the MERC Rooftop Regulations are reproduced as under:

“7. Inter-connection with the Distribution Network / Grid, Standards and Safety.

7.9 Grid Connected Renewable Energy Generating Systems connected behind the Consumer’s meter, and not opting for either Net Metering Arrangement or Net Billing Arrangement, shall be allowed only after prior intimation to the respective Distribution Licensee:

Provided also that in case the Consumer installs Renewable Energy Generating Systems behind the Consumer’s meter without prior intimation to the respective Distribution Licensee, then the total additional liabilities in terms of additional Fixed Charges or Demand Charges and any other Charges for such systems, shall be levied at twice the determined rate for such period of default.”

- 3.8. Aforesaid regulations show that it only deals with such RE plants which either have net billing arrangement, or net metering arrangement or Grid Connected Renewable Energy Generating Systems.
- 3.9. A conjoint reading of the MERC DOA Regulation with the GIRREGS Regulations shows that neither of the Regulations provide for any provisions regulating the captive rooftop solar plants, which are not connected to the grid and are set up for 100% self-consumption of electricity.
- 3.10. Regulation 3 of the MERC DOA Regulations deals with the provisions concerning eligibility for availing open access. The 8th proviso to Regulation 3.2 prescribes the conditions for availing open access by such consumers who simultaneously intend to have Roof-Top Solar Photo Voltaic Systems. It provides that such consumers, intending to have Roof-Top Solar Photo Voltaic Systems, can also simultaneously avail open access under the DOA Regulations on the condition that the credit for solar generation shall be adjusted on 'gross metering' basis for such period for which open access is availed by the Consumer. Regulation 2 (20) (a) defines the term "Gross metering" as a metering arrangement wherein, the entire energy generated by rooftop solar PV system is fed into the electrical grid.
- 3.11. AIGL intends to set up a dedicated captive roof top solar power plant with 100% electricity generated for self-consumption, therefore, the afore-stated provisions of MERC DOA Regulations will not be applicable.
- 3.12. Since the proposed captive rooftop plant will not be connected to the grid in any manner, therefore, it is understood that the proposed captive roof top solar power plant will not fall under the scope of the GIRREGS Regulations as prescribed under Regulation 3 quoted above. Consequently, the Regulation 7.9 will not be applicable on the Captive Rooftop Solar Power Plant set up at the property owned by AIGL.
- 3.13. Therefore, it appears that there is lack of clarity in the regulations with the situation wherein a consumer, availing open access from the distribution licensee, also sets up a dedicated captive rooftop solar PV plant which is not connected to the grid.
- 3.14. The Commission has the powers to adjudicate disputes that arise between a generator and a licensor as also issue necessary practice directions as may be required under Sections 86 (1) (e) read with Section 23 of the EA. The Commission further is dutybound to promote co-generation and generation of electricity from renewable sources under Section 86 (1) (e) of the EA.

3.15. RBDPL seeks intervention of the Commission to provide clarification regarding whether it is permitted to avail open access under the MERC DOA Regulations and simultaneously consume electricity generated from a dedicated CPP (which is not connected to the grid) or, for necessary direction as to the applicable regulations / orders of the Commission on RBDPL being an open access consumer and simultaneously operating a rooftop solar CPP.

4. MSEDCL in its reply dated 1 December 2020 made the following submissions:

- 4.1. RBDPL is neither an aggrieved person nor has been denied any permission by MSEDCL to operate its off-grid solar rooftop power plants.
- 4.2. Neither RBDPL nor CMCSL are entities recognized by either of the Regulations under which the recent Petition has been filed.
- 4.3. CMCSL has entered into a PPA with AIGL which is a consumer of MSEDCL. It is pertinent to note that neither any representation nor any dispute has been received by MSEDCL from AIGL till date about the present issue.
- 4.4. The issue at hand is a “Pure Commercial Dispute” between two private entities, the recourse of redressal of such dispute would surely be provided under the independent contract between the said entities. RBDPL through this Commission cannot seek redressal of its dispute for entities which are not recognized either under the Electricity Act, 2003 (EA) or the Regulations under which the present Petition has been filed.
- 4.5. Present Petition has been filed seeking “clarification whether the Petitioner is permitted to avail open access under the MERC DOA Regulations and simultaneously consume electricity generated from a dedicated captive rooftop plant (which is not connected to the grid) or to provide clarification as to the applicable regulations/orders of the Commission on the Petitioner being an open access consumer and simultaneously operating a rooftop solar power plant.”
- 4.6. RBDPL has selectively termed itself as “Open Access Consumer”. However, RBDPL is not a “Consumer” of MSEDCL and hence the prayers sought for in the Petition cannot be granted.
- 4.7. RBDPL has filed the present Petition on behalf of AIGL which being an incorporated entity is capable of representing itself. It would be fit in the interest of justice that AIGL being the aggrieved person should file a petition before the Commission.

- 4.8. Further, there is no provision in the EA under which Petitions in the form of Public Interest Litigation can be filed before SERCs.
- 4.9. RBDPL states that it wants to use the solar roof-top (without connecting to the Grid) then it would not be governed by the DOA Regulations, 2016 and the Amendment thereof. However, it would have to ensure that its consumer installation is completely isolated from the grid/MSEDCL's distribution system meaning thereby that his off-grid roof top and consumer premises should be a standalone system without being connected to MSEDCL for any purpose.
- 4.10. The moment it utilizes its solar roof-top (without connecting to the Grid) for any premise which is connected to the grid/MSEDCL's distribution system then it would necessarily fall under the DOA Regulations, 2016 and the Amendment thereof which provide for only one route to utilize open access and Roof-Top Solar Photo Voltaic Systems in the same premises as explained above. In that eventuality RBDPL would necessarily have to get connected to the grid and follow the provisions of the DOA Regulations, 2016 and the Amendment thereof.
5. AIGL, on 11 January 2021 filed an Impleadment Application on behalf of RBDPL and submitted that any decision of the Commission will directly affect it.
6. On 11 January 2021, RBDPL amended its Petition and made the below additional submission:
- 6.1. MSEDCL has filed contradictory statements. On one hand, it states that the supply / connectivity from the rooftop solar plant to the premises must be a standalone / isolated one, and on the other hand it states that the 'premises' must be a stand-alone and isolated. The said interpretations given by MSEDCL are not only starkly contradictory but also going beyond the defined scope and terms of the Regulations under clarification. It is further submitted that for these reasons the interpretation given by MSEDCL, the nature of the clarification petition is no more than just a clarification sought from the Commission; it is now a dispute requiring adjudication between Parties.
7. At the e-hearing through video conferencing held on 12 January 2021, the representative of the Parties reiterated their submissions. Advocate of MSEDCL stated that as AIGL has been impleaded as party in this matter they are not pressing on technical objection raised in their reply and requested the Commission to decide this matter on merits. The Commission inquired about the readiness of RBDPL to pay the Grid Support Charge/Additional Charges to the Utility as it will be supporting its power requirement at night time/ unavailability of solar power. RBDPL sought 3 days time to reply to the Commission's query.

8. RBDPL submitted its written arguments on 14 January 2021 with the below additional submission:

With respect to Isolation Factor

- 8.1. The nature of the solar power and its availability is intermittent. While efforts are being made to use renewable sources of energy, if the premises are cut off from the regular sources of power supply i.e. through the licensee, then it would lead to the AIGL's premises being without electricity for times when there are say clouds or during monsoons. In Maharashtra, the monsoons last for over 3 to 4 months, when the solar plant would not be effective. Furthermore, the interpretation of MSEDCL, essentially compels AIGL to supply some amount of power to the grid to be able to run a Solar Rooftop Power Plant, which is contrary to natural justice and the fundamental rights guarded by the Constitution of India.
- 8.2. The DOA Regulations 2016 governs the provisions relating to grant of open access by the distribution licensee. Regulation 3 of the said Regulations (as amended in 2019) deals with the eligibility for open access. The relevant extracts of the Regulations are reproduced as under:

"2. Definitions

(20) (a) "Gross metering" means a metering arrangement wherein, the entire energy generated by rooftop solar PV system is fed into the electrical grid subject to permissible technical limits as per interconnection standard and the system owner is benefited by way of sale of solar power to the Distribution Licensee at rate approved or adopted by Commission;

.....

"3. Eligibility to seek Open Access

3.2 Subject to the provisions of these Regulations, a Consumer having Contract Demand of 1 MVA and above with a Distribution Licensee shall be eligible for Open Access for obtaining supply of electricity from one or more (a) Generating Plants or Stations, including Captive Generating Plants; (b) Trading Licensees (c) Power Exchanges (d) Other Distribution Licensees (e) any other sources, or a combination thereof, and all collectively called 'Sources':

Provided further that Consumers intending to have Roof-Top Solar Photo Voltaic Systems can simultaneously avail open access under these Regulations; subject to a

condition that in such cases, the credit for solar generation shall be adjusted on Gross metering basis for such period for which open access is availed by the Consumer. The applicable rate for sale under such Gross metering arrangement shall be equivalent to the rate stipulated under the yearly Generic tariff Order for Renewable Energy Technologies based on the principles stipulated therein.”

- 8.3. The aforesaid provisions do not deal with a situation wherein an open access consumer intends to set up a dedicated captive roof top solar power plant with 100% electricity generated for self-consumption.
- 8.4. Regulation 3 and Regulation 7 of the GIRREGS Regulations 2019 deals with the ‘Scope and Applicability’ and ‘Inter-connection with the Distribution Network’ respectively.
- 8.5. A conjoint reading of the DOA Regulations 2016 with the GIREGS Regulation 2019 shows that neither of the Regulations provide for any provisions regulating the captive rooftop solar plants, which are not connected to the grid and are set up for 100% self-consumption of electricity.
- 8.6. It is submitted that by the doctrine of harmonious construction, it is evident that connection is required to be isolated and not the premises per se. If the Regulations implied the premises need to be isolated from the grid there would be no incentive to install Rooftop Solar plants for captive use considering their intermittent nature.
- 8.7. RBDPL and AIGL are willing to take all necessary steps for isolation of the rooftop solar PV from the grid of MSEDCL. Insistence of MSEDCL to connect to the grid and be bound by the provisions of the DOA Regulations 2016 and Rooftop Regulations 2019 would be onerous and would not support anybody’s cause. Additionally, RBDPL and AIGL are willing to ensure installing systems such as Reverse Export Relays or other similar systems to ensure absolute isolation and standalone operation of the rooftop solar power plant, which may even be subsequently inspected/ monitored by MSEDCL.

With respect to Grid Support Charges

- 8.8. As per the GIRREGS Regulations 2019 the primary requirement of applicability is that the RE Plant is “grid connected” and has “grid interactive installations”, in addition to being those RE Plants for which the applications are received on or after notification of the Regulations i.e. after 2019.
- 8.9. The Regulation 11 of Rooftop Regulations 2019 is as below:

“11. Net Metering - Energy Accounting and Settlement

11.1 The accounting of electricity exported and imported by the Eligible Consumer shall become effective from the date of connectivity of the Renewable Energy Generating System with the distribution network.

...

11.5 The Commission may determine in the retail Tariff Order such Grid Support Charges to be levied on the generated energy under Net Metering systems which shall cover balancing, banking and wheeling cost after adjusting RPO benefits, avoided distribution losses and any other benefits accruing to the Distribution Licensee. These Grid Support Charges would be determined consumer tariff category wise, based on the proposal of the Distribution Licensee in its retail supply Tariff Petition, supported by adequate justification: Provided that the consumers of all Categories having Sanctioned Load up to 10 kW shall be exempted from payment of Grid Support Charges for Net Metering systems

... ”

Therefore, the determination of the Grid Support Charges is left to the Commission, but the said charges cannot be levied upon category of RE Plants on whom the GIRREGS Regulations, 2019 are not applicable in the first place i.e., RE Plants / Generating Systems that are operating off-grid / without being connected to the grid. Consequently, the Grid Support Charges provided for under Regulation 11.5 of the GIRREGS Regulations, 2019 are to be levied on the generated energy under Net Metering Systems towards the purpose set out therein.

- 8.10. RBDPL's petition relates to a rooftop solar power plant that is not connected to the grid and therefore is off-grid, and hence there is no requirement for net-metering.
- 8.11. The Commission as per the Para 8.20.28 of its Order dated 30 March 2020 in Case No. 322 of 2019 has directed not to levy Grid Support Charges. Hence, no grid supported charges are payable by AIGL as the regulations in force are not applicable to it. In the alternative, the Commission has directed not to impose any such charges, towards promotion of the RE Generation in the state of Maharashtra.
9. MSEDCL submitted its written arguments on 19 January 2021 with the below additional submission:
- 9.1. The "Prayer" of RBDPL w.r.t simultaneously availing open access as well as consuming power from the rooftop solar captive power plant (which is not connected to the grid) is already answered in the negative by the provisions of the DOA Regulations 2016 and its Amendment, which clearly mandates as under:

Amended Regulation 2:

“(20) (a) “Gross metering” means a metering arrangement wherein, the entire energy generated by rooftop solar PV system is fed into the electrical grid subject to permissible technical limits as per interconnection standard and the system owner is benefited by way of sale of solar power to the Distribution Licensee at rate approved or adopted by Commission;”

Amended Regulation 3:

“Provided further that Consumers intending to have Roof-Top Solar Photo Voltaic Systems can simultaneously avail open access under these Regulations; subject to a condition that in such cases, the credit for solar generation shall be adjusted on Gross metering basis for such period for which open access is availed by the Consumer. The applicable rate for sale under such Gross metering arrangement shall be equivalent to the rate stipulated under the yearly Generic tariff Order for Renewable Energy Technologies based on the principles stipulated therein.”

- 9.2. Further, the DOA Regulations clearly includes “Captive Generating Plant” as one of the entities which can avail open access.

“3.2 Subject to the provisions of these Regulations, a Consumer having Contract Demand of 1 MVA and above with a Distribution Licensee shall be eligible for Open Access for obtaining supply of electricity from one or more

- (a) Generating Plants or Stations, including Captive Generating Plants;*
 - (b) Trading Licensees*
 - (c) Power Exchanges*
 - (d) Other Distribution Licensees*
 - (e) any other sources,*
- or a combination thereof, and all collectively called ‘Sources’:*

- 9.3. Further, the GIRREGS Regulations, 2019 mandates as below:

“3. Scope and Applicability

3.1 These Regulations would apply to:

- (a) Net Metering Arrangements;*
- (b) Net Billing Arrangements;*

(c) Grid Connected Renewable Energy Generating Systems connected behind the Consumer's meter, who have not opted either for Net Metering Arrangement or Net Billing Arrangement.

3.2 These Regulations shall be applicable to all Grid Interactive installations for which Applications are received on or after the notification of these Regulations."

From the perusal of the above provisions that "Prayer" of the Petitioner w.r.t simultaneously availing open access as well as consuming power from the rooftop solar captive power plant (which is not connected to the grid) is already answered in the negative and hence needs no clarification.

- 9.4. The Commission has amply clarified the scope of "Use of Captive Rooftop Solar installations" vide its Order dated 13 March 2019 in Case No.312 of 2018 as a purely interim arrangement pursuant to which the GIRREGS Regulations, 2019 as well as the DOA (First Amendment), Regulations, 2019 were notified. The Commission has specifically and consciously not allowed the simultaneous usage of open access and rooftop solar captive power plant.
- 9.5. The issue of "connection behind the Consumer's meter" is only applicable to Grid Connected Renewable Energy Generating Systems and not otherwise. Hence, any "Grid Support Charges" as envisaged under the Regulations can only be made applicable only to Grid Connected Renewable Energy Generating Systems. In simple terms "off-grid installation cannot be granted grid connectivity".

Commission's Analysis and Rulings

10. Present Petition was initially filed by RBDPL seeking clarification regarding applicability of the DOA Regulations, 2016 and GIRREGS Regulations, 2019 for the Captive Rooftop solar project of capacity 1000 kWp installed by CMCSL at the property of AIGL. RBDPL is the financing body for the said project and AIGL is consumer of MSEDCL.
11. MSEDCL in its reply dated 1 December 2020 raised objection to the locus standi of the petitioner stating that RBDPL is not affected party and neither RBDPL nor CMCSL are recognized by either of the Regulations under which the present Petition has been filed and requested Commission not to entertain the prayers of RBDPL.
12. Accordingly, on 11 January 2021, AIGL filed an application to be an Impleaded Petitioner to the present case. Further, RBDPL amended its Petition on 11 January 2021 seeking clarification on applicability of Regulations for a captive rooftop solar project which is stand alone and is in isolation state from the MSEDCL network. On adding AIGL as impleaded

Petitioner, MSEDCL has not pressed its objection that Petitioners are not affected party. Therefore, the Commission is addressing issues raised in the present matter on merits.

13. The Petitioners have submitted that AIGL as a consumer of MSEDCL is availing open access of 3000 kVA from a conventional source under group captive arrangement since February 2017. Further, a 1000 kWp rooftop solar project has been developed at AIGL's premise which it intends to convert into a dedicated rooftop plant for its self consumption, which will not be interacting with the MSEDCL's network. They are willing to ensure installing systems such as Reverse Export Relays or other similar systems to ensure absolute isolation and standalone operation of the rooftop solar power plant, which may even be subsequently inspected/monitored by MSEDCL.
14. MSEDCL has contended that as per the DOA (First Amendment) Regulations, 2019 and the GIRREGS Regulations, 2019, simultaneous usage of open access and rooftop solar captive power plant is not allowed. MSEDCL has further submitted that if solar rooftop system is not connected with the grid then it would not be governed by the DOA Regulations, 2016 and the amendment thereof. However, if the rooftop system (without connecting the Grid) is utilized for any premise which is connected to the MSEDCL's distribution network, then it will be governed by the DOA Regulations 2016.
15. The Commission notes that ambiguity in understanding of the extant regulations is noticed primarily due to peculiar nature of behind the meter rooftop Solar PV installation. On the one hand, Petitioners have stated that their 1000 kWp rooftop power plant is not connected to MSEDCL's system and is an off-grid installation; while on other hand, it is stating that they will install reverse power flow to ensure that power is not fed into MSEDCL's system. Once the installation is off-grid, there cannot be any flow of electricity into the Grid as there is no interconnection with the grid. Hence, installation of reverse power flow relay would not be required. However, in that case, off-grid installation of roof-top solar project needs to be completely isolated from consumer's electricity network connected to the grid of MSEDCL. Once consumer premise is connected to network of distribution licensee, each and every equipment connected to internal electrical network of consumer becomes part and parcel of the grid and accordingly becomes a grid connected installation. Therefore, if roof-top installation within the premises of consumer is connected to internal common electrical network of consumer, then it will have to be treated as grid-connected roof top installations. In case grid-connected roof-top Soar PV project is designed for self-consumption with reverse power flow relay to ensure that electricity generated from roof-top PV project is not fed into network of Distribution Licensee, then such installation needs to be treated as grid-connected behind the meter roof-top solar installation which do not exchange electricity with the grid.

16. Thus, roof-top PV installation in consumer's premises can be broadly classified in two categories viz. a) Off-grid roof-top PV – which does not connect with common electrical network of consumer having connectivity with network of Licensee, and b) Grid-connected roof-top PV which connects to common electrical network of consumer which has connectivity with network of licensee. Grid-connected roof-top PV can further be classified based on exchange of electricity with licensee's grid and its commercial settlement viz i) Net-metering, ii) Net-Billing and iii) behind the meter installations.
17. With the above stated understanding on the type of installations of roof-top PV in consumer's premises, now the Commission frames following issues for its consideration in the present matter:
- a. Whether DOA Regulations, 2016 and GIRREGS Regulations 2019 are applicable to off-grid roof-top PV installations?
 - b. What provisions of DOA Regulations 2016 are applicable to the consumer having grid-connected behind the meter roof-top PV installations?

The Commission is addressing these issues in the following paragraphs.

18. Issue a: Whether DOA Regulations, 2016 and GIRREGS Regulations 2019 are applicable to off-grid roof-top PV installations?

- 18.1. As explained in earlier part of this Order, off-grid roof-top PV installation are completely isolated and do not have any connectivity with network of licensees and hence it is not part of the Grid.
- 18.2. DOA and GIRREGS Regulations both are applicable only to the consumer connected with the Distribution System. Hence, DOA Regulations, 2016 and GIRREGS Regulations 2019 are not applicable for off-grid roof-top PV installations. Both parties have also endorsed the same understanding in their submissions.

19. Issue b: What provisions of DOA Regulations 2016 are applicable to the consumer having grid-connected behind the meter roof-top PV installations?

- 19.1. The Commission has notified GIRREGS Regulations 2019 which governs the grid-connected roof-top solar installations in consumer premises. As provided under this Regulations, grid connected roof-top solar can be categorised under any of the following three types of arrangements:

- a. Net-metering arrangement: Under this arrangement energy generated by roof-top solar project is used for self-consumption and the surplus is banked with Distribution Licensee. In case of lower solar generation than demand of the consumer, power is drawn from Distribution Licensee. Consumer is billed by Distribution Licensee for net energy used i.e. Energy drawn from Grid – Energy injected into the Grid.
- b. Net-billing arrangement: Under this arrangement energy generated by roof-top solar project is considered as sale to Distribution Licensee at commission determined tariff. Energy consumed by consumer is considered as drawn from Distribution Licensee. While raising bill to consumer, Distribution Licensee provides credit in monetary terms for solar energy procured by it.
- c. Behind the meter without net-metering or net-billing: Under this arrangement, 100% energy generated by grid connected roof-top solar project is used for self-consumption. For ensuring that no energy is injected into Distribution System, reverse power flow relay is installed.

Further, GIRRES Regulations, 2019 also envisaged that consumer availing net-metering arrangement and behind the meter without net-metering & net-billing arrangement be subjected to Grid Support Charges and additional fixed charges, respectively. Recovery of such charges have been enabled through Regulations for partly compensating Distribution Licensee for cost of network, banking facility, standby arrangement, distribution grid balancing and loss of cross-subsidy etc.

- 19.2. Thus, grid-connected roof-top solar project installation can be under any of above said three arrangements subject to its fulfilling the specified criteria for the same as stipulated under the Regulations. Such consumer having grid-connected roof-top solar PV project can also seek Open Access for meeting its remaining power requirement in full or part from source other than its Distribution Licensee. In addition to other requirements which need to be fulfilled by any consumers to become eligible for grant of Open Access, consumer with grid-connected roof-top PV installation has to comply with following additional condition of Regulation 3 of DOA (First Amendment) Regulations 2019:

“3. Eligibility to seek Open Access

.....

Provided further that Consumers intending to have Roof-Top Solar Photo Voltaic Systems can simultaneously avail open access under these Regulations; subject to a condition that in such cases, the credit for solar generation shall be adjusted on Gross metering basis for such period for which open access is availed by the Consumer. The applicable rate for sale under such Gross metering arrangement shall be equivalent to

the rate stipulated under the yearly Generic tariff Order for Renewable Energy Technologies based on the principles stipulated therein.”

- 19.3. Thus, as per above stated provision of DOA Regulations, consumer having roof-top Solar system can opt for Open Access and during that period energy generated from roof-top solar system shall be adjusted on gross metering basis. In its Statement of Reasons to DOA Regulations, the Commission has provided following justification for adding such condition:

“As regards other objections received on the proposal, the Commission would like to reiterate the rationale given by it in the explanatory memorandum, which is reproduced as under.

“Eligibility of consumers to avail simultaneously solar rooftop facility and open access was an issue brought to the attention of the Commission through various Petitions. While the roof top facility of the consumer may be under net metering or any other arrangement permitted, the Commission does not intend to restrict such consumers from availing Open Access. However, it is also required that while allowing so, there should be fair play between the consumers availing such benefits and rest of the consumers of the Distribution Licensee. This is particularly in the context that cost of generation from solar plant is way too cheaper compared to earlier days, when it could be equated to consumer tariffs and would have had lesser impact on the distribution licensee and its rest of the consumers. However, the scenario is changed as of now. In this context, it is proposed to give solar generation credit on a gross metering basis to such consumers who want to simultaneously avail Open Access.”

In view of the above, the Commission has decided to retain the amendment with necessary additional provision clarifying the applicable rate for such gross metering arrangement.” [emphasis added]

- 19.4. Therefore, while enabling the consumer to avail benefits of roof-top solar system and Open Access simultaneously, the Commission through above Regulations has stipulated that for period of Open Access, energy generated by roof-top solar system is to be accounted on gross metering basis.
- 19.5. Gross metering system referred in the above DOA Regulations is nothing but net billing arrangement stipulated under GIRREGS Regulations 2019. Two other modes of roof-top Solar PV arrangement i.e. net-metering and behind the meter without net-metering or net-billing arrangements allowed in GIRREGS Regulation are required to be treated as net-billing arrangement for the period in which consumer avails Open Access.

- 19.6. Accordingly, the Commission clarifies that net-metering or behind the meter arrangement of roof-top PV system of a consumer opting for Open Access shall be converted into net-billing arrangement for period of Open Access on temporary basis for tenure of Open Access. Post Open Access, commercial accounting of roof-top Solar system shall automatically be resorted to the original position prior to grant of Open Access.
20. Having clarified above aspects of roof-top solar projects and simultaneous use of Open Access facility, the Commission notes that in present matter, Petitioner has stated that it has off-grid solar system but will install reverse power flow relay for ensuring that no energy is fed into the Grid. Reverse power flow relay is required only when solar system is to be connected to the grid. Hence, it can be concluded that Petitioner's solar system is grid-connected behind the meter roof-top solar system without net-metering or net-billing arrangement. Under this circumstance, if Petitioner wishes to avail Open Access facility then as per DOA (First Amendment) Regulations 2019, behind the meter arrangement of roof-top PV system shall be converted into net-billing arrangement for the period of Open Access.
21. Further, at the e-hearing the Commission had inquired about the readiness of Petitioner to pay the Grid Support Charge/Additional Charges for its roof-top solar facilities. In reply, Petitioner had committed to make payment of any such charges as were determined by Commission. However, in its written submission later on, Petitioner avers that being off-grid project, Grid Support Charges are not applicable to it and further as per the Multi-Year Tariff (MYT) Order dated 30 March 2020 in Case No. 322 of 2019, the Commission itself has ruled that Grid Support Charges shall not be levied on roof-top solar projects.
22. In this regard, the Commission at Para 20 above has already held that Petitioner's behind the meter roof-top solar project which is to be connected with its internal network through reverse power flow relay is grid-connected solar system and hence GIRREGS Regulations 2019 are applicable to it. Following provisions of GIRREGS Regulations 2019 dealing with behind the meter roof-top solar projects will be applicable to Petitioner's roof-top solar project:

“7. Inter-connection with the Distribution Network / Grid, Standards and Safety.

7.9 Grid Connected Renewable Energy Generating Systems connected behind the Consumer's meter, and not opting for either Net Metering Arrangement or Net Billing Arrangement, shall be allowed only after prior intimation to the respective Distribution Licensee:

Provided that the Consumer shall be responsible for ensuring that all necessary safeguarding measures as specified by Central Electricity Authority (CEA) are taken:

Provided further that the Commission may determine additional Fixed Charges or Demand Charges and any other Charges for such Grid Connected systems excluding Non-fossil fuel-based Cogeneration Plants, in the retail Tariff Order, if the Distribution Licensee proposes such additional Fixed Charges or Demand Charges and any other Charges for such systems, in its retail supply Tariff Petition, supported by adequate justification:

Provided also that in case the Consumer installs Renewable Energy Generating Systems behind the Consumer's meter without prior intimation to the respective Distribution Licensee, then the total additional liabilities in terms of additional Fixed Charges or Demand Charges and any other Charges for such systems, shall be levied at twice the determined rate for such period of default."

(Emphasis Added)

In its Explanatory Memorandum to draft Regulations floated for public consultations, the Commission has provided following rational for above provisions:

*"Further, the Commission has also added certain requirements to be adhered to by RE generating systems installed behind the Consumer's meter. It is proposed that **such installations can be undertaken only after prior intimation to the respective Distribution Licensee, so that account of energy generation by such captive plant can be maintained and made available to Authorities for calculation of taxes and duties, if applicable.** Further, the Consumer shall be responsible for ensuring that all necessary safeguarding measures, as specified by the CEA, are taken. **It is also understood that the Distribution Licensee may incur certain additional expenses on account of such systems, and that such systems, though connected behind the Consumer's meter, do benefit from being connected to the network of the Distribution Licensee. Further, installation of such facility may reduce the utilisation of Distribution Network and thereby such consumer may pay lower charges for such network setup earlier for it. Such unrecovered part of expenses is then loaded on other consumers of the Distribution Licensee. Hence, an enabling provision has been introduced for levy of additional Fixed Charges or Demand Charges and any other Charges for such systems, provided that the Distribution Licensee shall propose such additional Fixed Charges or Demand Charges and any other Charges for such systems, in its retail supply Tariff Petition, supported by adequate justification.** In order to discourage consumers from installing such systems without intimating the Distribution Licensee, it is proposed that in such cases, then the total additional liabilities in terms of additional Fixed Charges or Demand Charges and any other Charges for such systems, shall be levied at twice the determined rate for such period of default."*

Therefore, in terms of GIRREGS Regulations 2019, consumer who wishes to install behind the meter roof-top solar installation for self-consumption has to intimate to the Distribution Licensee. Such provision has been included in the Regulations so that record of energy generated from such installation is available with Distribution Licensee which can be used for arriving at grid balancing requirements, if any and also to report the same to authorities for computation and levy of applicable taxes and duties on such generation. Further, Regulation also provides for levy of additional fixed charges or demand charges or any other charges on such behind the meter grid-connected installation so that some part of expenses of Distribution Licensees can be recovered from such consumer without requiring it to pass on to other consumers. Thus, in normal circumstances, behind the meter rooftop solar installation should have been subjected to additional fixed/demand charges. However, in recent MYT proceedings, the Commission observed that MSEDCL was not ready with registration and modalities of implementation of such provisions and hence, in MYT Order dated 30 March 2020, the Commission has deferred levy of such charges. Relevant part of Order is reproduced below:

“8.21.12 The Commission observes that Regulations for Grid interactive RTPV systems and the Statement of Reasons thereof have clearly specified the rationale for levy of such Additional Demand/Fixed Charges. However, without considering the preparedness, registry and modalities for implementation, the Commission is deferring the levy of such charges at this stage for rooftop PV systems behind the consumer’s meter and not availing net metering or net billing arrangement.”

Therefore, at present no additional Fixed /Demand Charges will be levied on behind the meter roof-top solar installation. However, same may be levied in future based on proposal of Distribution Licensee in upcoming tariff petition.

23. Hence, the following Order:

ORDER

- 1. Case No. 199 of 2020 is partly allowed.**
- 2. Provisions of Open Access Regulations and Grid Interactive Rooftop Renewable Energy System Regulations shall not be applicable to off-grid rooftop installations.**

- 3. Net-metering or behind the meter arrangement of roof-top PV system of a consumer opting for Open Access shall be converted into net-billing arrangement for the period of Open Access on temporary basis for the tenure of Open Access.**

Sd/-
(Mukesh Khullar)
Member

Sd/-
(I.M. Bohari)
Member

(Abhijit Deshpande)
Secretary

