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**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION (GRID
INTERACTIVE ROOFTOP RENEWABLE ENERGY GENERATING SYSTEMS)
(SECOND AMENDMENT) REGULATIONS, 2024**

STATEMENT OF REASONS

Dated: 29 August 2024

Introduction

The Maharashtra Electricity Regulatory Commission (“MERC” or “the Commission”) has notified the Maharashtra Electricity Regulatory Commission (Grid Interactive Rooftop Renewable Energy Generating System) Regulations, 2019 on 30 December 2019. In order to make these Regulations consistent with the Rules notified by the Ministry of Power (MoP), the Commission notified the MERC (Grid Interactive Rooftop Renewable Energy Generating System) (First Amendment) Regulations, 2023 on 16 November 2023. These Regulations notified in 2019 read with its first Amendment notified in 2023 are referred as the ‘Principal Regulations’.

As per Section 86 (1) (a) of the Electricity Act, 2003 (“EA 2003” or “the Act”), the State Electricity Regulatory Commissions (SERCs or Commissions) have been assigned the function of promoting generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person.

The Commission proposed the Grid Interactive Rooftop Renewable Energy Generating System (Second Amendment) Regulations, 2024 with the rationale for the various provisions proposed in the Draft (Second Amendment) Regulations, 2024 elaborated in the Explanatory Memorandum (EM) published along with the Draft (Second Amendment) Regulations, 2024.

Accordingly, the Draft (Second Amendment) Regulations, 2024 and the associated Explanatory Memorandum were published on the Commission's website www.merc.gov.in in downloadable format on 23 May 2024. A Public Notice was also published in daily newspapers Marathi (Maharashtra Times and Lokmat) and English (Economic Times and Times of India), inviting comments, objections and suggestions from all stakeholders to be submitted to the office of Commission on or before 14 June 2024.

Total 9 (nine) stakeholders have submitted their comments/suggestions/objections on the Draft MERC (Second Amendment) Regulations, 2024. The list of stakeholders who offered their comments/suggestions/objections on the Draft MERC (Second Amendment) Regulations, 2024, which have been considered by the Commission while finalising the Regulations, is placed at **Annexure-I**.

The main comments/suggestions/objections and views expressed by the stakeholders through their written submissions and the Commission's views thereon have been summarized in the following paragraphs. It may be noted that all the suggestions given by the stakeholders have been considered and the Commission has attempted to elaborate all the suggestions as well as the Commission's decisions on each suggestion in this Statement of Reasons (**SOR**). However, in case any suggestion is not specifically elaborated, it does not mean that the same has not been considered. Further, some stakeholders have suggested changes on Syntax/phrase/addition of word(s)/rewording related changes, etc., which have been suitably incorporated, wherever necessary.

Wherever possible, the comments and suggestions or objections have been summarised clause-wise, along with the Commission's analysis and ruling on the same. However, in some cases, due to overlapping of the issues/comments, the clauses have been combined in order to minimise repetition.

Some comments and suggestions were not directly related to the Draft Regulations on which inputs were invited. While the Commission has summarised such comments and suggestions or objections briefly in this Statement of Reasons (SOR), specific rulings on the same have not been provided, as the same are outside the scope of these Regulations.

The SOR is organised in the following Chapters, along the same lines as the Draft MERC (Grid Interactive Rooftop Renewable Energy Generating System) (Second Amendment) Regulations, 2024, summarising the main issues raised during the public consultation process, and the Commission's analysis and decisions on them which underlie the Regulations as finally notified:

Chapter 1: Enablement of Virtual Net Metering

Chapter 2: Electricity (Rights of Consumers) Amendment Rules, 2024 issued by MoP

Chapter 3: Additional Points.

1 Enablement of Virtual Net Metering

1.1 Introduction of 4th and 5th proviso to Regulation 2.1 (j) of the Principal Regulations:

“Provided also that Residential consumer can setup Renewable Energy Generating System at any place located within same Distribution Licensee’s area of supply and source renewable energy generated from such plant under Virtual Net-Metering Arrangement:

Provided also that multiple Residential consumers including common connection of housing society can come together and set-up Renewable Energy Generating System at a common place under Virtual Net Metering arrangement subject to condition that total capacity of such Renewable Energy Generating system shall not exceed summation of capacity eligible to each participating consumer.”

1.1.1 Comments Received

Maharashtra State Electricity Distribution Company Limited (MSEDCL) and Energy Department, the Government of Maharashtra (GoM) have submitted that Virtual Net metering arrangement is as good as sourcing power from Green Energy Open Access for residential consumers. Introducing Virtual Net Metering would complicate the regulatory and operational landscape. This provision opens the possibility for Renewable Energy (RE) developers to lease their projects to residential consumers. Such an arrangement could lead to RE developers effectively functioning as parallel licensees without actually holding a license, allowing them to enjoy the associated benefits without adhering to the regulatory requirements imposed on licensed entities. Hence, Virtual Net Metering shall not be permitted. Further, if the Commission chooses to implement the Virtual Net Metering, to avoid the exploitation by RE developers, only Rooftop mounted RE generating systems may be allowed under Virtual Net Metering. The Commission, through the MERC (Distribution Open Access) (Second Amendment) Regulations, 2023, has already introduced the Green Energy Open Access for consumers with a contract demand or sanctioned load of 100 kW and above. In light of this, MSEDCL requested to implement the Virtual Net Metering arrangement by setting an upper limit of 100 kW for eligible consumers.

Sachin More suggested that the size of virtual net metering arrangement systems should be more than 200 kW but less than 2 MW. This will lead to decentralised asset monetization. No existing utility scale plants or projects operational under Distribution Open Access arrangement shall be allowed for virtual Net metering arrangement. Virtual Net Metering shall be allowed only on Agricultural and/or Rural load dominated lines and/or feeders.

Samir Gandhi highlighted that the word ‘Common Place’ has been used. Clarification may be provided on whether the Rooftop PV systems should be within the premises or outside the premises.

Atul Patil of Lodha Group suggested allowing capacity of RE generating systems to go beyond sanctioned load requirements. Reference may be taken from Delhi ERC’s Regulations which states that capacity under Virtual Net Metering shall be up to 5 times of sanctioned load of participating consumers with maximum of 10 MW. Scope of eligible consumers be expanded to include institutions such as Hospitals, Colleges, Schools and other managed by Charitable Institutions, Non-Profit organisations/Trusts not covered in the domestic consumer category, offices of Government/Local authorities and consumers in commercial tariff category. Commercial entities such as real estate developers are maintaining the electrical assets in Intergated township projects for (10) years. Hence, single or multiple connections in real estate developers name should be eligible to participate in Virtual Net Metering arrangement.

AEML-D submitted that by making the instant amendments in the manner they are, lines are blurred between green energy open access and rooftop RE under Virtual Net Metering, as there could be cases under Virtual Net Metering scheme where the generator is at a physically different location and is set up as an independent generator, as opposed to a rooftop based RE plant, which is located behind a given consumer’s point of supply. As a result, there’s every possibility that, taking advantage of no open access charges, there’s large scale mushrooming of RE plants under Virtual Net Metering arrangement in a given Distribution Licensee’s area. Despite clearly being open access, the Distribution Licensee will be deprived of open access charges, impacting its other (non-participating) consumers.

Urja Sahayog has submitted that allowing virtual metering for housing society/s those are not having adequate space on roof for installation of Rooftop Solar in welcome step. This will help these consumers to enjoy electricity at the cheaper rate decreasing their financial burden.

1.1.2 Analysis and Commission’s Decision

The Commission notes that the consumers of multi-storied building are facing difficulties in installing rooftop solar in their common space and source energy generated from such common RE generation system to each flat. Hence, the Commission decided to enable virtual net metering modality.

MSEDCL and AEML-D in their respective submission contended that Virtual Net Metering is akin to Green Energy Open Access, and it will lead to mushrooming of RE developers. The Commission is aware of this aspect and has made categoric provision of Open Access Charges and Losses for sourcing RE under Virtual Net Metering modality. However, for initial roll-out phase, it needs to be promoted. Hence, the Commission has exempted these Open Access Charges and Losses till rooftop solar capacity reaches 5000 MW. It is further clarified that the

cap of 5000 MW is irrespective of modality i.e. Net Metering or Net Billing arrangement. After crossing of threshold capacity of 5000 MW, Open Access charges will be applicable to new installations using wheeling facility.

As far as sizing of RE system is concerned, suggestions have been received for restricting/ setting upper limit or specifying a band for eligible capacity. In Virtual Net Metering, the basic principle of energy netting has been used and in order to keep consistency in approach the Commission is not altering any RE sizing stipulations made in Principle Regulations. In case of multiple connections in housing society, who are opting for Virtual Net Metering, total capacity of RE system is restricted up to summation of capacity eligible to each participating consumer. However, to address concerned that RE developer can effectively act as Distribution Licensee by clubbing all residential consumers, the Commission decide to restrict multiple residential consumers within same housing society to come together for setting up of RE generating System at common place. Such restriction will limit the size of RE generating system and will fetch benefits of distributed generation.

Further, the Commission is consciously restricting Virtual Net Metering to Residential consumers in multi storied building only. Other consumer category may opt for Net-metering or Group Metering facility under these Regulations or opt for Green Energy Open Access.

It is also pertinent to note that MNRE vide its Office Memorandum dated 7 June 2024 notified operational guidelines for implementation of PM Surya Ghar: Muft Bijali Yojana for the component 'CFA to Residential consumers'. Said Guidelines has recognized virtual net metering arrangement for residential consumers. Thus, present Regulations being finalized will help speedy implementation of Government of India's scheme.

'Common Place' used in 5th proviso means the common area in society premises or Rooftops or any other land parcel which may or may not be adjacent to Society land.

Considering above, the Commission has modified the clauses as below:

“Provided also that Residential consumer in multi storied building can setup Renewable Energy Generating System at any place located within same Distribution Licensee's area of supply and source renewable energy generated from such plant under Virtual Net-Metering Arrangement:

Provided also that multiple Residential consumers situated in multi storied building within area of operation of a housing society or an apartment owners association including their common connection, can come together and set-up Renewable Energy Generating System at a common place under Virtual Net Metering arrangement subject to condition that total capacity of such Renewable Energy Generating system shall not exceed summation of capacity eligible to each participating consumer.”

1.2 Introduction of Regulation 2.1 (z)(a) after Regulation 2.1 (z) of the Principal Regulations:

“Virtual Net Metering” means a modality whereby entire energy generated from a Renewable Energy Generating System is exported to the grid from Renewable energy meter or gross meter and the energy exported is adjusted in either one or more than one participating Residential consumer(s) including common connection of housing society located within the same Distribution Licensee’s area of supply.”

1.2.1 Comments Received

MSEDCL submitted that only residential consumers shall be allowed to set up RE generating system anywhere within Maharashtra. The adoption of virtual net metering primarily benefits high-end consumers. This could potentially lead to a reduction in MSEDCL's high-end residential consumer base and sales. Consequently, there may be a decrease in revenue and cross-subsidy, ultimately resulting in tariff increases for other consumer categories. MSEDCL highlighted technical challenges in energy accounting, grid stability and data management complexities. MSEDCL suggested implementing Virtual Net Metering in a phased manner. This approach would allow MSEDCL to address operational challenges systematically, fine-tune the processes, and provide adequate support to consumers. Initially Virtual Net Metering shall be allowed to residential consumers having contract demand up to 5 kW only and gradually extend for other residential consumers with higher contract demand. Further, residential consumers of a single housing society shall be eligible under Virtual Net Metering. Hence, MSEDCL requested the Commission to include word ‘single’ before housing society in the given regulation.

As per AEML-D the word ‘Renewable energy meter’ ought to be reworded as ‘Renewable Energy Generation Meter’ since the Principal Regulation has defined the terminology as ‘Renewable Energy Generation Meter’. Further, the word ‘gross meter’ ought to be removed/ deleted, since under Virtual Net Metering Arrangement, generated energy is to be exported 100% to grid only and there is no consumption by the Distribution Licensee involved in this. Hence, there is no need of ‘gross meter’ terminology in the definition.

Protostar suggested that every flat can be powered by a hybrid system by utilizing a large common battery, which benefits from better pricing due to its size. This approach allows for more efficient integration of solar power and grid power, promoting energy efficiency and the use of renewable energy sources. Additionally, a large hybrid system can enhance grid stability during sudden changes in solar insolation. However, this is not feasible under the current proposed draft regulation, as the Solar PV System is not directly connected to the residents; instead, it is connected via a separate line to a Renewable Energy Meter solely for export purposes and during outage/interruption of supply, the power generated from RE generating system will be wasted.

Protostar submitted that when multiple consumers wish to participate under Virtual Net Metering, then for exporting power to the grid separate connection is required to be taken while installing RE generating system. It is suggested that in case consumers (residential consumers along with common connection of housing society) participating are from the same building having same meter cabin (either with bus bar or without bus bar), then said RE generating system should be allowed to have connection/Virtual Net Metering arrangement with any one of the participating consumers, preferably common connection of the housing society. This will save any additional infrastructure requirement viz: service line, meter etc. Protostar has suggested hardware-based approach. It has proposed to consider allowing the energy settlement at a common net meter for the entire building. The distribution of electricity can then be allocated to each apartment via Energy Allocation Devices (EAD)/Smart Power Distribution Unit (SPDU). This approach will simplify the billing process for the Distribution Licensee and ensures fair distribution of solar generated power

1.2.2 Analysis and Commission's Decision

In Para 1.1.2 above, the Commission has spelt out rationale for allowing applicability of Virtual Net Metering to Residential consumers. The Commission is in agreement with suggestion of AEML-D and the word 'Renewable energy meter' has been reworded as 'Renewable Energy Generation Meter'. The Commission also accept the request that in Housing Society, if it is technically feasible, then instead of taking separate connection for Rooftop RE Generating System, one of the existing connections can be act as net-metering connection and surplus energy from that connection is adjusted against other participating consumers in pre-specified ratio.

The Commission notes that for any housing society, sustainable green eco system can be created by optimal utilization of RE Generating systems coupled with battery storage. Such system can be envisaged as a Micro-Grid connected with the main Grid. The utilisation of storage systems is also envisaged MoP's the Electricity (Rights of Consumers) Amendment Rules, 2021 dated 28 June 2021 wherein Sub-Clause 4 of Rule 11 reads as below:

“(4) The arrangements for net-metering, gross-metering, net-billing or net feed-in shall be in accordance with the regulations made by the State Commission, from time to time:

Provided that where the regulations does not provide for net-metering, net-billing or net feed-in, the Commission may allow net metering to the Prosumer for loads up to five hundred Kilowatt or upto the sanctioned load, whichever is lower and net-billing or net feed-in for other loads:

Provided further that in the case of Prosumers availing net-billing or net feed-in, the Commissions may introduce time-of-the-day tariffs whereby Prosumers are incentivised to install energy storage for utilization of stored solar energy by them or feeding into the grid during peak hours thus helping the grid by participating in demand response of the Discoms:

Provided also that in case of net-metering or net-billing or net feed-in, the distribution licensee may install a solar energy meter to measure the gross solar energy generated from the Grid Interactive rooftop Solar Photovoltaic system for the purpose of renewable energy purchase obligation credit, if any:

Provided also that the Commission may permit gross-metering for Prosumers who would like to sell all the generated solar energy to the distribution licensee instead of availing the net-metering, net-billing or net feed-in facility and the Commission shall decided for this purpose the generic tariff for gross-metering as per tariff regulations:”

Such micro grid at Society level which include RE generating System with and without battery storage integrated with Diesel generating system will help in utilisation of Solar energy which otherwise cannot be utilised when supply from the Distribution Licensee is not available. Such system will also reduce fossil fuel consumption and hence needs to be promoted. Therefore, the Commission has added proviso in final regulations for allowing such society level Micro grid using virtual net-metering.

Accordingly, the Commission has revised the definition of Virtual Net Metering as follows:

*“2.1(z)(a) **“Virtual Net Metering”** means a modality whereby energy generated from a Renewable Energy System is exported to the grid from Renewable energy generation meter or net-meter and the energy exported is adjusted in either one or more than one electricity service connection(s) of participating Residential consumers(s) situated in multi storied building of same housing society or apartment owners association including their common connection located within the same Distribution Licensee’s area of supply:*

Provided also that residential housing society or apartment owners association can set up grid connected micro-grid within their area of operation encompassing Renewable Energy systems with or without storage for serving multiple consumers residing in the society and/or for optimizing emergency use of diesel based electricity generation.”

1.3 Introduction of Regulation 4.4 after Regulation 4.3 of the Principal Regulations:

“4.4 Grid connectivity and scheduling of the Renewable Energy Generating System installed under virtual net-metering arrangement shall be governed by relevant Regulations of the Commission.”

1.3.1 Comments Received

AEML-D submitted that the word ‘and scheduling’ ought to be removed/ deleted, since there is no scheduling involved for the cases under this Regulation.

1.3.2 Analysis and Commission's Decision

The Commission notes that under Virtual Net metering, participating consumers can setup RE generating system at place outside their premise. Under such circumstances, such RE generating system needs to take Grid connectivity as per applicable Rules and Regulations. Further capacity of RE generating system will be decided based on eligibility of each participating consumers. As such RE generating system can seek Grid connectivity and if its Capacity crosses threshold limit stipulated in RE Forecasting and Scheduling Regulations / Deviation Settlement Mechanism Regulations, then such RE generating systems will be subjected to scheduling. Hence, even though consumers are not subjected to scheduling, RE generating system seeking separate Grid connectivity may be subjected to scheduling requirement. Hence, the Commission do not find it appropriate to delete the word scheduling from Regulations 4.4. However, added the words 'if applicable' in the Regulations to provide clarity. Accordingly, revised Regulation 4.4 is as follows:

4.4. Grid connectivity and scheduling of the Renewable Energy Generating System installed under virtual net-metering arrangement, if applicable, shall be governed by relevant Regulations of the Commission.

1.4 Introduction of Regulation 11.10 after Regulation 11.9 of the Principal Regulations:

“11.10 Virtual Net Metering– Energy Accounting and Settlement

(a) The energy generated from Renewable Energy Generating System shall be credited in the monthly electricity bill of each participating Residential consumer(s) including common connection of housing society as per the ratio of procurement from Renewable Energy Generating System indicated under the agreement entered by the consumer(s):

Provided that capacity of Renewable Energy Generating System becomes available to participating consumer based on such ratio shall not exceed capacity eligible for such consumer under net-metering arrangement;

Provided further that participating consumers shall have option to change the ratio of procurement once in financial year by giving advance notice of two months to Distribution Licensee.

(b) The electricity consumption in any time block (e.g., peak hours, off-peak hours, etc.) shall be first compensated with the electricity generation in the similar time blocks in the same billing cycle of the participating consumer(s). Any surplus generation over consumption in any time block in a billing cycle shall be accounted as if the surplus generation/ Energy Credits occurred during the off-peak time block for Time of Day (TOD) Consumers and normal time block for Non-TOD Consumer.

- (c) *Where the units credited during any billing period of any participating consumer exceeds the import of units by that consumer, such surplus credited units shall be carried forward in the next billing period as energy credits for such participating consumer(s).*
- (d) *For unadjusted net credited Units of electricity at the end of each financial year, the provisions of Clause 11.4 (c) will be applicable for each participating consumer.*
- (e) *Applicability of Open Access Charges and losses for sourcing electricity from Renewable Energy Generating System is exempted till installed capacity of rooftop solar reaches 5000 MW in Maharashtra”*

1.4.1 Comments Received

MSEDCL submitted that with Virtual Net Metering, the post-adjustment consumption is reduced, often falling into a lower tariff slab. This discrepancy leads to reduced revenue and undermines the cross-subsidy mechanism. Therefore, MSEDCL requested the Commission to permit it to charge the consumption units, post-adjustment, at the same rates applied to a standard consumer without Virtual Net Metering. This adjustment is necessary to prevent revenue loss and ensure the integrity of the cross-subsidy framework. The Commission need to define Normal Time Blocks for Non-ToD Consumers. Under Virtual Net Metering, the power consumed from Rooftop RE generating stations will flow through the transmission/distribution network which results in technical losses. Failure to account for such losses would inaccurately reflect higher distribution losses for MSEDCL. Therefore, MSEDCL requested that losses incurred for sourcing electricity under Virtual Net Metering may be factored into energy accounting and settlement processes. Currently, over 2000 MW of rooftop solar capacity has been installed by MSEDCL consumers across Maharashtra. Further, residential consumers participating in Virtual Net Metering will exclusively utilize the distribution infrastructure, necessitating the recovery of wheeling charges from them. Also, non-recovery of Open Access charges like Additional Surcharge, Cross-subsidy Surcharge, etc. will have impact of revenue. Consequently, compensating for this revenue loss would necessitate an increase in tariffs for other consumers.

Sachin More highlighted that Regulation 11.10 (e) specifically mentions rooftop Solar capacity of 5000 MW. It should be clearly mentioned that the Solar Rooftop capacity includes both systems under Virtual Net Metering and individual Net Metering.

Samir Gandhi submitted that clarity is required whether exemption from Open Access charges is applicable for agreement period or not, if any consumers install RE generating system in exemption period.

AEML-D submitted that word ‘agreement’ in Regulation 11.10 (a) should be replaced with ‘Net-metering agreement’ to be in sync with the Regulation. Draft Regulation 11.10 (b) envisages that Residential Consumers are covered under ToD tariff. However, currently ToD billing is not applicable for Residential consumers. Hence, a proviso may be inserted, under Regulation 11.10 (b) stipulating that till the time ToD tariff is not applicable to residential consumers, settlement of the energy generated from Renewable Energy generating System shall be credited on monthly basis in the monthly electricity bill of each participating residential consumer(s).

AEML-D also submitted that Regulation 11.10 (a) of the Draft Regulation speaks about the option provided to the participating Residential consumer(s) to change the ratio of procurement of each consumer. In this regard the Regulation should clearly provide that the participating consumers will be represented by a ‘Nodal Person’ who will be representing the consumer(s). The Regulation should include a definition of the ‘Nodal Person’ and the requirement of the ‘Nodal Person’ should be included in the Net Metering agreement.

Urja Sahayog suggested that the exemption from Open Access and wheel charges will be beneficial to dominant players like M/s. Adani Power, M/s. Tata Power and BEST.

1.4.2 Analysis and Commission’s Decision

MSEDCL’s suggestion of charging the residual consumption of Residential consumer, post-adjustment, at the same rates applied to a standard consumer without Virtual Net Metering cannot be accepted as it would be against the slab-wise tariff approved for Residential category consumer under Tariff Order. Hence, the Commission is not making any changes in Regulation 11.10 except use of word ‘or surplus energy injected through net-meter’ and ‘Net-metering Agreement’ in clause 11.10(a).

Regarding clarity on period of exemption of Open Access Charges and losses, the Commission notes that such exemption is to be stipulated under the Agreement which is valid for 20 years as per Regulation 10 of the Principal Regulations. Hence, for Agreement entered before achieving limit of installation of 5000 MW RE generating system under these Regulations, exemptions stipulated in these Agreements as per provisions of the Regulations shall remain applicable till validity of that agreement.

As far as dispensation with regards to Time of Day (ToD) is concern, it is clarified that the Commission through its Tariff Orders decides applicability of ToD tariff structure to any consumer category. In case, consumer category is not subjected to ToD tariff structure then energy settlement of consumer under that tariff category shall be carried out on monthly basis without any consideration to time of injection and time of drawl. To clarify this aspect which will also be applicable to other Net Metering arrangements, the Commission has added Regulation 11.11 as follows:

“11.11 Settlement of energy generated from Renewable Energy generating system for a consumer, who is not within the ambit of TOD Tariff structure, shall be undertaken on monthly basis.

The Nodal contact person need to be defined for receiving and providing all correspondences. Hence, the Commission has included definition of Lead Person in final Regulations as below.

“2.1(m)(a) “Lead Person” means the person who is himself a participating consumer and is nominated by other participating consumers under Virtual Net Metering for making all correspondence on their behalf with the Distribution Licensee.”

Further, to have clarity about responsibilities of such Lead Person, the Commission has added Regulation 4.5 as follows:

4.5 Responsibilities of Lead Person under Virtual net Metering:

- i. He/she shall be a one of the participating consumers under Virtual Net Metering and be a signatory to Net Metering Agreement on behalf of participating consumers.*
- ii. He/she shall act as a Nodal person for all correspondence with Distribution Licensee.*
- iii. Any change in the Lead Person has to be communicated in writing with approval from all the participating consumers.”*

1.5 Introduction of Clause 8.7 after Clause 8.6 of Annexure-3 of the Principal Regulations: -

“ 8.7 (a) In case of Virtual Net Metering, the energy generated by the Renewable Energy Generating System shall be credited in the monthly electricity bill of each participating Residential consumer(s) including common connection of housing society as per the ratio of procurement as indicated below:

<i>Sr. No.</i>	<i>Name of consumer (Starting with primary connection)</i>	<i>Consumer No.</i>	<i>Sharing Ratio (%)</i>

(b) Participating consumers shall have option to change the ratio of procurement once in financial year with as advance notice of two months.

(c) The electricity consumption in any time block (e.g., peak hours, off-peak hours, etc.) shall be first compensated with the electricity generation in the

similar time blocks in the same billing cycle of the participating consumer(s). Any surplus generation over consumption in any time block in a billing cycle shall be accounted as if the surplus generation/ Energy Credits occurred during the off-peak time block for Time of Day (TOD) Consumers and normal time block for Non-TOD Consumer.

- (d) Where the units credited during any billing period of any participating consumer exceeds the import of units by that consumer, such surplus credited units shall be carried forward in the next billing period as energy credits for such participating consumer(s).*
- (e) For unadjusted net credited Units of electricity at the end of each financial year, the provisions of Clause 11.4 (c) will be applicable for each participating consumer.*
- (f) Applicability of Open Access Charges and losses for sourcing electricity from Renewable Energy Generating System is exempted till installed capacity of rooftop solar reaches 5000 MW in Maharashtra.”*

1.5.1 Comments Received

AEML-D suggested that a new section may be introduced above clause 8.7 (a) specifying name of the Nodal Person. Further, any changes in the Nodal Person have to be communicated in writing with approval from all the participating Residential consumer(s). Further, Regulation 8.7 (b) should be modified to provide option to change the ratio of procurement once in financial year with as advance notice of two months through its Nodal Person.

1.5.2 Analysis and Commission’s Decision

The Commission notes that recognition of Lead Person in Net Metering Agreement is necessary and hence provision has been added. Further, stipulations with regards to settlement of excess units to Non-ToD consumers has been clarified in accordance with Para 1.6.2 above. Based on above the revision in Regulations reads as below:

“ 8.7 (a) *In case of Virtual Net Metering, (name of person/s) is authorised as Lead Person for coordinating with the Distribution Licensee on behalf of participating Residential consumer(s).*

Provided that any change in Lead Person has to be communicated in writing with approval from all the participating Residential consumer(s).

- (b) In case of Virtual Net Metering, the energy generated by the Renewable Energy Generating System or surplus energy injected through net-meter shall be credited in the monthly electricity bill of each participating Residential*

consumer(s) including common connection as per the ratio of procurement as indicated below:

Sr. No.	Name of consumer (Starting with connection of Lead Person)	Consumer No.	Sharing Ratio (%)

- (c) *Participating consumers shall have option to change the ratio of procurement once in financial year with as advance notice of two months through its Lead Person.*
- (d) *The electricity consumption in any time block (e.g., peak hours, off-peak hours, etc.) shall be first compensated with the electricity generation in the similar time blocks in the same billing cycle of the participating consumer(s). Any surplus generation over consumption in any time block in a billing cycle shall be accounted as if the surplus generation/ Energy Credits occurred during the off-peak time block for Time of Day (TOD) Consumers. Further, for a consumers, who are not within the ambit of TOD Tariff structure, settlement of energy generated from Renewable Energy generating system shall be undertaken on monthly basis in the electricity bill of each participating consumer (s) as per ratio of procurement indicated under Net Metering Agreement.*
- (e) *Where the units credited during any billing period of any participating consumer exceeds the import of units by that consumer, such surplus credited units shall be carried forward in the next billing period as energy credits for such participating consumer(s).*
- (f) *For unadjusted net credited Units of electricity at the end of each financial year, the provisions of Clause 11.4 (c) will be applicable for each participating consumer.*
- (g) *Applicability of Open Access Charges and losses for sourcing electricity from Renewable Energy System is exempted during validity of this Agreement if it is executed before installed capacity of rooftop solar reaches 5000 MW in Maharashtra.”*

2 Electricity (Rights of Consumers) Amendment Rules, 2024 issued by MoP

2.1 Introduction of Regulation 9.7 (a) after Regulation 9.7 of the Principal Regulations:

“ 9.7 (a) During the time period from the feasibility study or deemed acceptance of the application till the completion of installation, in case, there is any requirement of upgradation of distribution infrastructure like augmentation of service line, distribution transformer capacity, and the like for installation of the required capacity of roof top solar photo voltaic system, the same shall be carried out by the Distribution Licensee in adherence to the timeline specified in Maharashtra Electricity Regulatory Commission (Electricity Supply Code and Standards Of Performance for Distribution Licensees, including Power Quality) Regulations, 2021 as amended from time to time:

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

2.1.1 Comments Received

MSEDCL submitted that under Virtual Net Metering arrangement, residential consumer can set up RE generating system anywhere in the licensee’s area of supply. Therefore, if the enhancement of distribution network infrastructure, specifically dedicated to such RE generating systems, becomes necessary, the associated costs should be borne by the respective consumer. MSEDCL highlighted that residential consumer, benefiting from the Virtual Net Metering arrangement, should exclusively bear the associated expenses for strengthening the distribution infrastructure. Passing on such cost to other consumer categories through the Aggregate Revenue Requirement (ARR) will needlessly inflate tariffs.

As far as load extension is concern after application of load enhancement & payment of approved charges & submission of documents, MSEDCL can carry out load enhancement and distribution network strengthening, as required.

Samir Gandhi highlighted that increasing sanctioned load is just a paper adjustment. Installation of rooftop Solar system will reduce the actual Distribution Transformer Centre (DTC) loading. Hence, the Commission shall remove load enhancement requirement for Rooftop Solar PV systems. Clarity on expenditure to be incurred by Distribution Licensees for enhancement of load need to be provided.

2.1.2 Analysis and Commission's Decision

The provisions of incurring expenses on network upgradation, augmentation of service line and distribution transformer capacity through ARR of Distribution Licensee have been proposed in accordance with the MoP Rules. Hence, the Commission has not made any modifications in the Draft MERC (Grid Interactive Rooftop Renewable Energy Generating Station) (Second Amendment) Regulations, 2024 in this regard.

As far as suggestion that installation of Rooftop Solar PV will reduce loading of Distribution Transformer and hence requirement of increase in sanctioned load may not be required, the Commission is of the opinion that capacity of Rooftop Solar PV installation is linked to contracted demand/sanctioned load of consumer. Hence, it is up to consumer to apply for Solar PV installation up to their contract demand/sanction load or seek increase in contract demand /sanction load for enabling installation of higher capacity rooftop solar installation.

2.2 Substitution of Clause C of Annexure-1 of the Principal Regulations: -

“c For installation of Renewable Energy Generating Systems, the technical feasibility study shall be completed within a period of (15) days and the outcome of the study shall be intimated to the applicant, failing which it shall be presumed that the proposal is technically feasible:

Provided that the applications for Renewable Energy Generating Systems upto 10 kW capacity, complete in all respects shall be deemed to have been accepted without requiring technical feasibility study and any commensurate enhancement of the sanctioned load of the consumer, as may be required, shall be carried out by the Distribution Licensee.”

2.2.1 Comments Received

MSEDCL submitted that after application of load enhancement application & payment of approved charges & submission of documents, MSEDCL can carry out load enhancement and distribution network strengthening, as required.

Protostar suggested that in case of multiple residential consumers and common connection of society, net metering should allow without requiring any increase in load for the common connection of society even if the RE generating systems capacity exceeds the sanctioned load of the common connection. A load extension is not required because a Solar PV system does not add load to the grid. It serves as a supplementary power source that reduces the grid's load.

2.2.2 Analysis and Commission's Decision

As a practice, it is observed that sometimes participating consumers opt to enhance the connected load. It is expected that enhancement of connected load and processing of

applications under this Regulations shall be done simultaneously. The said stipulations have been adopted from the notified Rules.

The Commission has therefore, not made any modifications in the Draft MERC (Grid Interactive Rooftop Renewable Energy Generating Station) (Second Amendment) Regulations, 2024 in this regard.

3 Additional Points

3.1 Publication of Draft in Marathi

3.1.1 Comments Received

Shri Rahul Dighe requested to publish draft Regulations in Marathi language also.

3.1.2 Analysis and Commission's Decision

Along with already published English version of draft Regulations, the Commission has published Marathi version of draft Regulations on its website on 5 June 2024 for enabling stakeholders to submit their comments.

3.2 Implementation of Regulations:

3.2.1 Comments Received

Samir Gandhi submitted that a time limit must be prescribed for Distribution Licensees to implement the notified Regulations. All process must be on-line from application to final sanction/release letter. Only Agreement will be in Physical form. In spite of directives, MSEDCL's field offices demand physical copies to process the application.

3.2.2 Analysis and Commission's Decision

Regulations becomes applicable from date of notification in Government Gazette unless any separate date of applicability has been stipulated in the said Regulations. Any non-compliance will be dealt as per Section 142 of the Electricity Act, 2003. Objector may file separate Petition highlighting non-compliance of Regulations which will be dealt with as per applicable Law.

3.3 RPO Compliance

3.3.1 Comments Received

Atul Patil of Lodha Group suggested that the electricity generated under Virtual Net Metering framework be considered for compliance of RPO for the Distribution Licensee if the RE generator is not an obligated entity.

3.3.2 Analysis and Commission's Decision

The Commission notes that the said provision is already stipulated under Regulation 14 of the Principal Regulations.

3.4 P2P Trading Approach:

3.4.1 Comments Received

AEML-D suggested that the Commission may consider allowing settlement of RE energy under Virtual Net Metering between a consumer's rooftop RE set up under Net Metering and the members of a given residential society or societies i.e. any consumer of a given Distribution Licensee setting up a rooftop RE generator under Net Metering arrangement, may be allowed to enter into contract with consumers of a residential society or across different residential societies within the same Distribution Licensee's area, for allocation of its surplus generation (in agreed percentage), which will be set off with the consumption of such participating consumers virtually. This mechanism would ensure that the RE plant set up remains physically behind a consumer's Net Meter and residential consumers will be virtual beneficiaries of the same. This mechanism will promote peer to peer (P2P) trading of energy, while still remaining distinct from green energy open access.

3.4.2 Analysis and Commission's Decision

To enable, P2P trading of surplus RE generation amongst consumers, dedicated platform with associated rules of operation needs to be developed which is possible only by framing of separate Regulations on this aspect. The Commission will initiate separate regulatory process for framing of Regulations governing such P2P trading amongst consumers.

3.5 Issues in Overlapping Distribution License areas:

3.5.1 Comments Received

AEML-D highlighted that the requirement that generating station needs to be set up within the same Distribution Licensee's area of supply is going to present problems in those areas where there are more than one distribution licensees. For example, in case of AEML-TPC, TPC's area of supply covers the whole of Mumbai City and Suburbs and overlaps with AEML, MSEDCL and BEST. So, a consumer or a set of consumers in a given residential society could be partly supplied by AEML and TPC both and all such consumers could be participating in the Virtual Net Metering arrangement. In this case, which Licensee's area would be considered for setting up of RE plant? In this regard, it is suggested that the Regulation could restrict that the participating consumers under Virtual Net Metering arrangement must be served by one Distribution Licensee only and if any such consumer decides to change-over or switch over to the other distribution licensee during the currency of a Virtual Net Metering arrangement, then such consumer shall not remain a participating consumer in the Virtual Net Metering arrangement, anymore.

3.5.2 Analysis and Commission's Decision

The Commission notes that Virtual Net Metering is akin to Open Access wherein participating consumers use network of licensee for sourcing power from RE generating System. In Open Access, network licensee becomes important. Similarly, under virtual net metering, area of supply of Distribution Licensee to which consumer is connected becomes relevant area of distribution licensee under parallel Distribution Licensee scenario.

Sd/-
(Surendra J. Biyani)
Member

Sd/-
(Anand M. Limaye)
Member

Sd/-
(Sanjay Kumar)
Chairperson

Annexure - I

Sl. No.	Name of Stakeholders
1	Mr. Rahul Narayan Dighe
2	Mr. Sachin More
3	Mr. Samir Gandhi, Greenergy Sustainables LLP
4	Mr. Atul Patil, Lodha Group
5	M/s. Protostar Technologies Pvt. Ltd.
6	Urja Sahayog, Ch. Sambhaji Nagar
7	M/s. Adani Electricity Mumbai Limited (AEML)
8	M/s. Maharashtra State Electricity Distribution Co. Ltd.
9	Government of Maharashtra