Office of the
Executive Director (Dist-III/Infra)
Maharashtra State Electricity Dist. Co. Ltd.
"Prakashgad", 5th Floor, Station Road,
Bandra (E), Mumbai -400 051.
Email: edinfra@mahadiscom.in

MAHAVITARAN
Maharashtra State Electricity Distribution Co. Ltd.
CIN U40109MH2005SGC153645

(A Govt. of Maharashtra Undertaking)

Ref. No. : ED (Infra)/RTS/No. 00786 **Date: 07.01.2025**

To,
The Superintending Engineer
All O & M Circles, MSEDCL

Sub: - Guidelines for observing PV capacity (AC/DC) installed in accordance with Connected/ Sanctioned Load of prosumer for RTS installations.

Ref: 1. MERC (Grid Interactive Rooftop Renewable Energy Generating Systems) Regulations, 2019 dtd.30.12.219
2. Commercial Circular No. 322 dtd. 21.01.2020
3. MNRE Office Memorandum No 318/17/2024-Grid Connected Rooftop, Dt. 07.06.2024
4. MERC (GIRREGS) (FIRST AMENDMENT) REGULATIONS, 2023, Statement of Reasons, Dt. 16.11.2023
5. MNRE OM for component CFA to Residential Consumers, Dt. 07.06.24

MERC has notified MERC (Grid Interactive Roof top Renewable Energy Generating Systems) Regulations, 2019. Accordingly circular as under reference 2 issued for providing guidelines on implementation for installation of Renewable Energy Generating System on Roof top or any mounting structure by existing/new consumers of MSEDCL in their premises.

As per 5.2 of said circular "The capacity of the Renewable Energy Generating System to be connected at the Eligible Consumer's premises under any of the three arrangements shall not exceed the Sanctioned load (in kW) or the Contract Demand (in kVA) of the Consumer, as applicable."

The major components of RTS installations includes PV Panels, Inverters and during inspection of RTS installations from field officers queries arises regarding excess of DC PV panel capacity or excess inverter capacity connected at site by consumers/vendors and brought to notice of this office for further guidelines from field officers & consumers/vendors.

1. DC Capacity Variation:

The Connected/Sanctioned load is in terms of AC Capacity, whereas PV panels come with DC capacity. As per Statement of Reasons of MERC as under reference-4 on Page 5, 2.1.2 it is stated that *"It is clarified that for arriving at eligible capacity, the capacity of Renewable Energy Generating System shall be reckoned based on its output capacity in AC."*

At present Polycrystalline, Monocrystalline & Mono PERC PV panels readily available in market and having panel capacities which varies from 310, 330, 335, 535, 540, 550 watt per panel depending PV panel selection.

Hence in order to streamline installed DC capacity conflicts with respect to sanction load, the following guidelines given with examples.

i. If sanction load is 2 KW and consumer installs RTS with 7 nos PV panels with capacity 330 watt per panel DC capacity will be 2.31 KW. In such case the field officer should not ask consumer to increase sanction load to meet out installed DC capacity.

ii. If sanction load is 2 KW and consumer installs RTS with 7 nos PV panels with capacity 335 watt per panel DC capacity will be 2.345 KW. In such case the field officer should ask consumer to increase sanction load to meet out installed DC capacity or 1 panel to be reduced to meet out sanction load i.e.2.01 KW.

Accordingly all the field officers hereby inform to observe no of PV panels installed in RTS plant in such a way that it will be less than or just cross the sanction load. Also as per guidelines issued by MNRE vide office memorandum as under reference 5, "***the CFA provided will be as per the rated DC capacity of the module system (according to the CFA structure) and not as per the inverter capacity***"

2. Inverter Rating:

As per guidelines issued by MNRE vide office memorandum as under reference 5 under Annexure 3, technical specification for Inverter ***"2.9 In case the consumer is having a 3-ϕ connection, 1-ϕ/3-ϕ inverter shall be provided by the vendor as per the consumer's requirement and regulations of the State."***

Accordingly, the consumer having 3 phase connection should install 3 phase inverters to provide better and balances grid stability and to ensure proper islanding. In case of 3 phase connections with CL/SL less than 5 KW where 3 phase inverters are readily not available in market, 1phase inverters allowed.

All field officers shall implement above guidelines for Roof Top solar connections.

(D. R. Aundhekar)
Executive Director-III (Infra)
Corporate Office, Mumbai

Copy s.w.r. to:

The Director (Projects),/ The Director (Operation), MSEDCL, Mumbai

Copy f.w.cs. to:

1. Jt. MD/Regional Director, Regional Office, MSEDCL, Konkan/Ch. Sambhaji Nagar/Nagpur/Pune
2. Executive Director (B & R)/ Executive Director (Dist.), MSEDCL, Mumbai

Copy to:

The Chief Engineer, O&M Zone, All Zones.