

No. 318/27/2022-GCRT
Government of India
Ministry of New and Renewable Energy

Atal Akshay Urja Bhawan,
Lodhi Road, New Delhi -110003.
Dated: 03rd of October, 2022

OFFICE MEMORANDUM

Subject: Clarification on applicability of central financial assistance (CFA) available under Rooftop Solar (RTS) Programme Phase-II for solar systems installed under Virtual Net Metering (VNM) arrangement.

Ministry is implementing Rooftop Solar (RTS) Programme Phase-II and providing CFA for installation of RTS plant in residential sector by individual household or by GHS/RWA. Some of the States and UTs are having provision of Virtual Net Metering, wherein a group of consumers of a Distribution company can install a solar plant within the area of the same company and avail benefits of net metering against the solar power fed into the grid from that solar plant.

2. A clarification has been sought by different stakeholders on the applicability of CFA available under RTS Programme Phase-II for residential consumers installing solar plants under VNM arrangement.

3. In this regard, it is to clarify that the CFA applicable under RTS Programme Phase-II of MNRE will also be applicable for solar plants setup under VNM arrangement, subject to following conditions: -

- i. CFA would be available only for residential consumers of rural areas,
- ii. Considering that connected load of a residential consumer in rural areas would generally be not more than 3 kW, each participating consumer under VNM would be allowed to install capacity upto 3 kW and avail subsidy available under RTS Programme Ph-II.
- iii. Solar plant installed under VNM shall supply power to the same distribution sub-station (HT or LT side) through which the participating consumers are connected. This will ensure reliable power supply to the participating consumers and other benefits of co-locating power generation and consumption.

4. Further, to facilitate the installation of solar plants under VNM arrangement this Ministry has prepared a Concept Note (attached herewith) covering some of the possible business models including CAPEX, RESCO and Utility operated model. Please note that these models are indicative and only for guidance. The actual implementation will depend on the applicable regulations and other conditions.

Encl: As above.

Veepin Kumar
03-10-2022

(Dr. Veepin Kumar)
Deputy Director (RTS)

To,

All concerned State Implementation Agencies.

Concept Note on Virtual Net Metering

1. Need

Residential consumers, especially the households with inadequate roof area/roof strength/ roof right/ shadow free roof/inaccessible roof etc. have remained deprived of rooftop solar despite numerous efforts from the Ministry of New and Renewable Energy (MNRE) and States. It is critical to promote and facilitate new and innovative models for proliferation of rooftop solar (RTS) systems under different metering mechanisms for the eligible segment of the consumers.

2. Concept of Virtual Net Metering

“Virtual Net Metering” means an arrangement whereby entire electricity generated from a Solar Project installed at Consumer premise or any other location is injected through Solar Electricity Meter and the electricity exported is adjusted in either one or more than one electricity service connection(s) of participating Consumer(s) located within the same Distribution Licensee’s area of supply.

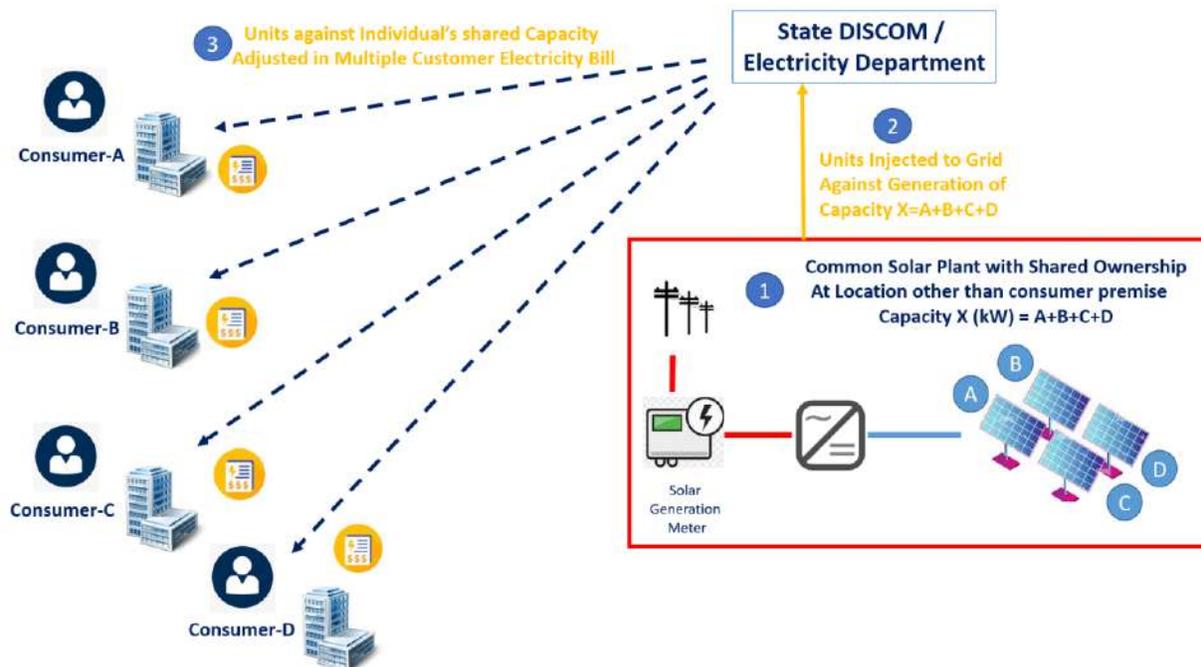


Fig.1 Virtual Net Metering Concept

Since the power flow is virtual, parties need not set up the system on consumer premises rather it can be anywhere within the Distribution Licensee area. This gives the opportunity for the system to serve more than one consumer. For example, suppose a group of 4 consumers, within the same distribution license area, decide to install a single large solar plant on a single roof or multiple roofs or a mix of roof(s) and ground(s) or ground(s) only, within the same distribution license area. They decide to share the solar plant capacity in the proportion of A:B:C:D and notify the

same to the DISCOM. The units generated from the solar plant will be injected into the grid and their units will be measured by a solar meter. The units, so generated, will be allocated to the 4 consumers in the same ratio of A:B:C:D which is adjusted against the consumption of units from grid by individual consumers (See Fig. 1). The solar plant capacity proportions for each consumer is completely at the discretion of group of consumers. However, the allocation shall still be as per the state regulations for solar energy.

Instead of small solar plants on individual roofs a common solar plant of higher capacity will have advantage of economies of scale, higher efficiencies and lower maintenance cost, thus solar power can be generated at lower per unit cost.

3. Current Status

Virtual net-metering is increasingly gaining traction among different States of the country. In such cases, the solar plants can be set up on any adjoining land or rooftops as per Virtual Net Metering regulations by a group of households (either in CAPEX or RESCO mode). Following States and Union Territories (UTs) already have provisions for Virtual Net Metering:

1. Goa
2. Delhi
3. Jammu and Kashmir
4. Ladakh
5. Odisha
6. Puducherry
7. Andaman & Nicobar
8. Lakshadweep
9. Chandigarh
10. Dadra & Nagar Haveli and Daman & Diu

The Ministry is pursuing with Regulators of other States and UTs also to allow virtual net metering.

Process flow of Virtual Net Metering is given below:

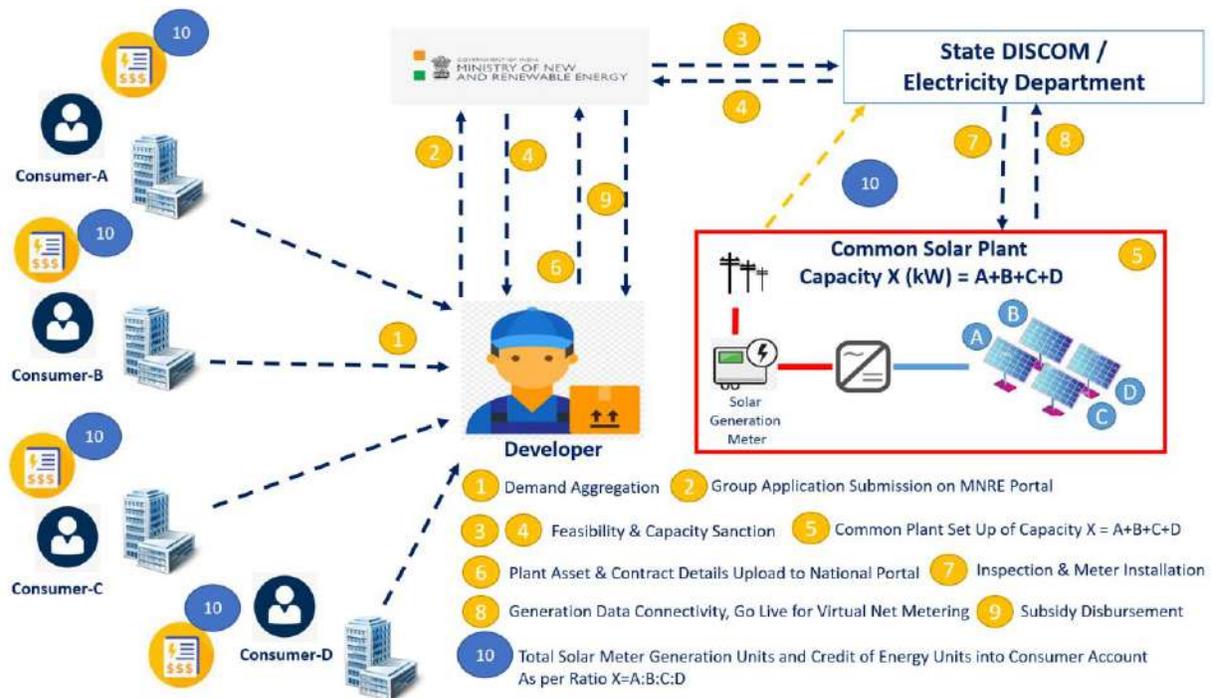


Fig.2 VNM Implementation Process

4. VNM Financial Models:

4.1. Model-1: Capital Investment (CAPEX) Model

In this model, a group of residential consumers will identify a piece of land/roof/mix of land & roof to set up a solar plant under VNM arrangement. The cost of plant (excluding MNRE subsidy) and land is borne by the consumers. The EPC developer/vendor will install the plant and maintain as per agreed terms. The electricity generated from the solar power plant is distributed to all the 4 participating consumers in the same ratios as the share of cost of plant (including land) among them. The DISCOM or Electricity department will adjust generated units in consumer's electricity bill.

Capital Investment:

MNRE	Consumer
Rs. 14,558/- per kW	Balance cost

Plant Ownership: Shared Consumer ownership