

No. 318/331/2017-Grid Connected Rooftop
Government of India
Ministry of New and Renewable Energy

Block no. 14, CGO Complex,
Lodi Road, New Delhi,
Dated 20th August 2019

Office Memorandum

Subject: Operational Guidelines for implementation of Phase - II of Grid Connected Rooftop Solar Programme for achieving cumulative capacity of 40,000 MW from Rooftop Solar (RTS) Projects by the year 2022

This refers Ministry's Order No 318/331/2017-GCRT Division dated 8th March 2019 vide which sanction was issued for launch of Phase - II of Grid Connected Rooftop Solar Programme for achieving cumulative capacity of 40,000 MW from Rooftop Solar (RTS) Projects by the year 2022 covering following components: -

- (i) Component- A: Setting up of 4000 MW of Grid Connected Rooftop plants in residential sector with Central Financial Assistance (CFA)
 - (ii) Component- B: Incentives to Discoms based on achievement for installing additional grid connected rooftop capacity in all sectors over and above the base level, with the incentive being limited to the first additional 18000 MW of rooftop capacity added in the country. Achievement above this level will not be eligible for any incentive.
2. The Operational Guidelines for implementation of Phase II of the Grid Connected Rooftop Solar Programme programme are enclosed.
 3. This issues with the approval of Competent Authority.



(Aujender Singh)

Deputy Secretary to the Govt. of India

To,

1. All central Ministries and Departments
2. ACS/Principal Secretaries/Secretaries (Renewable Energy/Energy/Power) of States/UTs
3. DISCOMs/ State Nodal Agencies of all States/UTs
4. Principal Director of Audit, Scientific Audit-II, DGACR Building, I.P. Estate, Delhi
5. Pay and Account Officer, MNRE, New Delhi

Copy to:

1. PS to Hon'ble Minister of State (I/C) for Power, NRE and Skill Development and Entrepreneurship
2. PPS to Secretary/AS/AS&FA, MNRE
3. All Advisers & Group Heads
4. Director(NIC) to upload this on the Ministry's website
5. Sanction folder



(Aujender Singh)

Deputy Secretary to the Govt. of India

Guidelines on implementation of Phase – II of Grid Connected Rooftop Solar Programme for achieving 40 GW capacity from Rooftop Solar by the year 2022

1.0 Background

1.1 As a part of Intended Nationally Determined Contributions (INDCs), India has committed to increase the share of installed capacity of electric power from non-fossil-fuel sources to 40% by 2030. Solar energy is one of the main source to accomplish the target of 40% of electric power from non-fossil-fuel. Government of India has set the target of achieving 100 GW of solar power capacity in the country by the year 2022 of which 40 GW to be achieved from rooftop solar (RTS).

1.2 The rooftop solar (RTS) plant is a system installed mainly on the roof of a building and includes installations on open contiguous land within the area of premises wherein valid and live electricity connection has been provided by the concern Distribution utilities/companies (DISCOMS). Typically, 1(one) kWp RTS plant requires about 10 sq. m area. The Solar power so generated can then be used either for captive consumption of the premises or can be fed into the grid and be adjusted in the electricity bill. Net-metering regulations notified by respective State Electricity Regulatory Commissions (SERCs) provide a legal framework for such adjustment. RTS plants help DISCOMS in reducing transmission and distribution losses as power consumption and generation are co-located. These Plants are also useful in tackling day time peak load as solar generation profile matches such peak loads during the day.

1.3 The Government, on 30th December 2015, approved a program ‘Grid Connected Rooftop and Small Solar Power Plants Programme’ for installation of 4,200 MW RTS plants in the country by year 2019-20, of which 2,100 MW was through CFA and balance 2,100 MW was without CFA. The RTS projects sanctioned under this Program are under implementation by State Nodal Agencies (SNA’s), Solar Energy Corporation of India (SECI), Public Sector Undertakings (PSUs) and other Government Agencies (GAs).

2.0 The Government, on 19th February 2019 approved Phase-II of ‘Grid Connected Rooftop and Small Solar Power Plants Programme’ for achieving cumulative capacity of 40 GW RTS plants by 2022. In Phase-II, it has been decided to implement the programme by making the DISCOMS and its local offices as the nodal points for implementation of the RTS programme. DISCOMS will play a key role in expansion of RTS as DISCOMS are having a direct contact with end user and they provide approval for installation, manage the distribution network and also have billing interface with rooftop owner.

3 Aim and Objectives of Phase-II of Grid Connected Rooftop Solar Programme

The key objectives of the programme are:

- a. To promote grid connected RTS in all consumer segments, viz., residential, institutional, social, Govt., commercial, industrial etc.
- b. To bring DISCOMS at forefront as key drivers for rapid deployment of RTS.
- c. To create awareness, capacity building, human resource development, etc.
- d. To promote sustainable business models.
- e. To create additional RTS capacity of 38000 MW in the country by 31.12.2022 out of which a capacity of 4000 MW in residential sector with Central Financial Assistance and 34000 MW in other sectors (i.e., Social, Government, educational, PSUs,

- Statutory /Autonomous bodies, Private Commercial, Industrial Sectors etc.) by suitably incentivizing DISCOMs
- f. To promote domestic manufacturing of solar cells and module

4 Strategy

The programme will be implemented through DISCOMs. This will lead to ease of access for the consumers. The programme provides for Central Financial Assistance (CFA) for the household owner and Group Housing Societies to set up RTS on the rooftop of their residence/residential campus. DISCOMs should create customer friendly environment by making enabling provisions in their regulations and smooth approval process required for RTS. Since the requisite expertise on solar energy for implementation of this Programme may not be available with DISCOMs, they will be at liberty to use the services of State Nodal Agencies (SNAs) engaged in the promotion of Renewable Energy of the respective States/UTs.

5. Implementation arrangement

The following major issues have been identified during the Phase-I of RTS programme: -

- Multiple tenders by different agencies and subsequently considerable delay in tendering.
- Involvement of multiple stakeholder viz. SNAs, DISCOMs, PSUs, Developers etc.
- Lack of uniform regulation/mandatory notification for rooftop solar
- Lack of uniform regulations.
- Lack of awareness among the prospective beneficiaries.

To address the above issues, and especially the fact that the consumer had to approach multiple agencies for getting a RTS plant installed, it has been decided to implement the programme by making the DISCOMs and its local offices as the nodal points for implementation of the RTS programme. The major components of this phase II of the programme are: -

- Component A: Setting up of 4000 MW of grid connected rooftop solar projects in residential sector with Central Financial Assistance (CFA)
- Component B: Incentives to Electricity Distribution Companies (DISCOMs) based on achievement towards initial 18000 MW of grid connected rooftop solar plants

5.1.1 Component A: Setting up of 4000 MW of grid connected rooftop solar projects in residential sector with Central Financial Assistance (CFA): In most of the States/UTs the residential sector enjoys benefit of subsidized electricity; therefore, beneficiaries of this sector would not be inclined to adopt rooftop solar until some capital CFA mechanism is put in place to reduce the cost of rooftop solar. Further, considering the fact that lower consumption slab pays lower tariff and vice versa, the CFA for RTS is also required to be restructured.

5.1.2 The CFA has been restructured and higher CFA up to 40 % will be given for RTS systems up to 3 kW capacity. For RTS systems of capacity above 3 kW and up to 10 kW, the CFA of 40% would be applicable only for the first 3 kW capacity and for capacity above 3 kW the CFA would be limited to 20 %. The residential sectors users may install RTS plant of

even higher capacity as per their requirement and the respective SERC regulation; however, the CFA would be limited for first 10 kWp capacity RTS plant as mentioned above.

5.1.3 For Group Housing Societies/Residential Welfare Associations (GHS/RWA) CFA will be limited to 20% for installation of RTS plant for supply of power to common facilities. The capacity eligible for CFA for GHS/ RWA will be limited to 10 kWp per house and total not more than 500 kWp, inclusive of RTS already installed on individual houses in that GHS/ RWA at the time of installation of RTS for common activity.

5.1.4 For the purpose of this component of the programme, Residential RTS plant would be the solar power system installed mainly on the roof of a residential building having an active residential power connection from the local DISCOM, and would also include installations on open contiguous land within the premises of the Residential building. The CFA pattern for the residential sector will be as follows: -

Type of residential sector	CFA (as percentage of benchmark cost or cost discovered through competitive process whichever is lower)
Residential sector (maximum up to 3 kW capacity)	40 % of benchmark cost**
Residential sector (above 3 kW capacity and up to 10 kW capacity)*	40 % up to 3 KW Plus 20% for RTS system above 3 kW and up to 10 kW
Group Housing Societies/Residential Welfare Associations (GHS/RWA) etc. for common facilities up to 500 kWp (@ 10 kWp per house), with the upper limit being inclusive of individual rooftop plants already installed by individual residents in that GHS/RWA at the time of installation of RTS for common activity.	20 %

**The residential sector users may install RTS plant of even higher capacity as provisioned by respective State electricity regulations; however, the CFA will be limited up to 10 kWp capacity of RTS plant.*

*** Benchmark cost may be different in General Category States/UTs and Special Category States/UTs i.e., North Eastern States including Sikkim, Uttarakhand, Himachal Pradesh, Jammu & Kashmir, Lakshadweep, and Andaman & Nicobar Islands. CFA shall be on benchmark cost of MNRE for the state/ UT or lowest of the costs discovered in the tenders for that state/ UT, whichever is lower*

5.1.5 MNRE will allocate capacity for installation of RTS System in residential sector by DISCOMS in the ensuing year. One of the parameters for allocating the capacity will be the demand raised by the DISCOM and capacity required for fulfilment of solar RPO of the State as notified by Ministry of Power. For this, DISCOMs will be required to submit yearly online proposal, in MNRE's SPIN portal (www.solarrooftop.gov.in) by the month of March. However, for the Year 2019-20, the DISCOMs shall be permitted to submit proposals in MNRE's SPIN portal within one month from the date of publication of these operational guidelines. Further, MNRE may ask for demand from DISCOMs directly to the Ministry, instead of going through the SPIN portal. In addition, preference would be given to

States/UTs who provide an additional subsidy/benefit over and above the CFA being given by the Central Government.

5.1.6 The implementing agency i.e. Discoms or its authorised agency shall invite Expression of Interest for empanelment of agencies for supply, installation, testing & commissioning of RTS system in residential premises. To ensure quality and post installation services only manufacturers of solar panels and system integrators fulfilling pre-determined technical and financial criteria would be allowed to participate in the bidding process. The selected bidders shall follow the quality control orders and standards for all components of RTS system and its installation procedure, if any, issued by MNRE from time to time. All the bidders within the price bracket of $(L1 + X\% \text{ of } L1)$ shall be empanelled. The digit "X" may be decided by the agency and should be clearly indicated while inviting Expression of Interest. The digit "X" shall not be more than 25. Further, if total no. of empanelled agencies are found to be less than 5 in the acceptable band, then the DISCOM may also include those agencies who fall in $L1+(X+5)\%$ of $L1$, provided they agree to match $L1$.

5.1.7 The beneficiary will have option of installing RTS system through any of these empanelled vendors at net of CFA amount i.e. making payment to the vendors after deducting the eligible CFA amount. The vendor will claim the CFA from the implementing agency. The CFA for residential sector as stated above shall be permissible only if domestic manufactured Solar Panels (using domestic manufactured Solar cells) are used by the beneficiary. However, CFA will be limited up to 20% / 40% (as the case may be) of the benchmark cost of RTS system as defined by MNRE from time to time or the rate discovered through transparent bidding by the implementing agency, whichever is lower. In case of RESCO model the benefit of the CFA should be passed on to the customer in the form of reduced tariff by factoring in the CFA through competitive process. Provisions of GFR shall be applicable for projects where Ministry is providing financial support.

5.1.8 The Implementing agency or Ministry officials or designated agency may inspect the ongoing installation or installed plants. In case the systems are not as per standards, non-functional on account of poor quality of installation, or non-compliance of AMC, the implementing agency/Ministry reserves the right to blacklist the vendor. Blacklisting may inter-alia include the following: -

- a. The Vendor/Firm will not be eligible to participate in tenders for Government supported projects.
- b. In case, the concerned Director(s) of the firm/company joins another existing or starts/ joins a new firm/company, the company will automatically be blacklisted.

5.1.9 The participating Government owned DISCOMs will be eligible to avail advance CFA up to 30% of the total CFA amount for the project. For private DISCOMs, CFA will be disbursed on reimbursement basis. However, if required private DISCOMs will be eligible to avail advance CFA upon submission of bank guarantee of an equivalent amount. More details on release of CFA slabs is given in para 11 of these guidelines. For settlement of project account, the implementing agency will have to submit the UC, Audited SoE, project completion certificate and online Project Completion reports in SPIN portal of MNRE. Implementing Agency will get service charges @ 3% of eligible CFA for implementing the programme for the various tasks as detailed in para 10 of these Guidelines. The service charges will be given only after completion of the project. The fund allocated in the