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स्वास्थ्य अनुसंधान विभाग, स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार

Indian Council of Medical Research
Department of Health Research, Ministry of Health and Family Welfare, Government of India

No.18/1/2020Admn-II

Dated: 21.1.2020.

To

The Directors/Directors-in-Charge of
Permanent Institutes/Centres of ICMR.

Subject : Mandatory installation of Grid Connected Rooftop Solar (RTS) in all the Central Government Ministries/Departments including the PSUs, subordinate offices, autonomous bodies, organisations, institutions and field offices under their control by the year 2020.

Sir/Madam,

Please find enclosed herewith a copy of OM F. No. 318/74/2019/GCRT dated 14.1.2020 received from Joint Secretary, Ministry of New & Renewable Energy (Solar Roof Top Division), New Delhi on the subject mentioned above forwarding therewith note for the cabinet for information and necessary action.

Yours faithfully,

(Bharat Bhushan)
Sr. Administrative Officer
for Director General

Encl: As above

Copy to:-

1. PS to DG/PS to Addl. DG/PS to Sr. DDG (A)/PS to Sr. FA
2. All Divisional Heads
3. Asstt. Director-General (Admn.)
4. Dr. L.K.Sharma, Scientist 'E' – soft copy of the same has been mailed at your email ID(sharma.lk@icmr.gov.in) for website upload.

Secret

F.No. 318/74/2019/GCRT
Government of India
Ministry of New & Renewable Energy
(Solar Roof Top Division)

Block No 14, CGO Complex
Lodhi Road, New Delhi-110003
Dated: 14 /01/2020

OFFICE MEMORANDUM

Subject: Mandatory installation of Grid Connected Rooftop Solar (RTS) in all the Central Government Ministries/Departments including the PSUs, subordinate offices, autonomous bodies, organisations, institutions and field offices under their control by the year 2022.

A copy of draft Note for the Cabinet on the above-mentioned subject is enclosed. The draft Cabinet note has been approved by the Hon'ble Minister of State (Independent Charge) for the Ministry of Power and Ministry of New and Renewable Energy and Minister of State for Skill Development and Entrepreneurship.

2. As the issue concerns all Central Government Ministries/Departments, it is requested that comments on draft Note for the Cabinet may kindly be provided within two weeks of the receipt of this Office Memorandum.

14/01/2020

(Amitesh Kumar Sinha)
Joint Secretary to the Government of India
Ph: 011-24362228
E-mail: amitesh.iras@gov.in

Sen DDs
kindly circulate
to all divisions
as well as HR

Encl: As above

To,

All the Secretaries
(All the Ministries/Departments of Government of India)

Copy to: (i) Prime Minister's Office
(ii) Director, (Cabinet), Cabinet Secretariat, Rastrapati Bhawan, New Delhi

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ADG(HQ) 17/01/2020
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Sr AO(Admn)
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SECRET

File No 318/74/2019- GCRT

Ministry of New and Renewable Energy

NOTE FOR THE CABINET

Subject: - All the Central Government Ministries/Departments including the PSUs, attached and subordinate offices, autonomous bodies, organizations, institutions and field offices to mandatorily install Grid Connected Rooftop Solar (RTS) on the Government buildings under their control all over the country by the year 2022.

Introduction

This note seeks approval of the Cabinet for issuance of a direction to all the Central Government Ministries/Departments including the PSUs, attached and subordinate offices, autonomous bodies, organizations, institutions and field offices to mandatorily install Grid Connected Rooftop Solar (RTS) on the Government buildings under their control all over the country by the year 2022.

2. Background

2.1 Grid connected rooftop solar (RTS) plant is a system installed mainly on the roof of a building and includes installations on open contiguous land within the premises wherein valid and live electricity connection has been made by the concern Distribution utilities/companies (DisComs). Typically, 1 kWp RTS plant requires about 10 sq. m area. Such power 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. Metering regulations notified by respective State Electricity Regulatory Commissions (SERCs) provide a legal framework for such adjustment. RTS plants also help DISCOMs by reducing transmission and distribution losses as power consumption and generation are co-located. These are also useful in tackling day time peak loads as solar generation profile matches such peak loads. 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 is to be achieved from RTS.

2.2 As a part of their intended Nationally Determined Contributions (INDCs), India has pledges to reduce the carbon emissions intensity of GDP by 33 to 35 percent by 2030 from 2005 level and install at least 40 percent cumulative electric power capacity from non-fossil fuel-based energy resources by 2030. To meet this commitment Government have set a target of installing 175 GW of renewable power capacity in the country by the year 2022. Out of the 175 GW of Renewable Power capacity target set by the year 2022, 100 GW is planned from the Solar Energy. Out of the 100 GW from the Solar Power, 40 GW is expected from the Rooftop Solar and balance 60 GW from the Ground mounted solar power plant.

2.3 The Rooftop Solar Programme is being implemented by the MNRE since June 2014. In Phase-I of Rooftop Solar Programme, financial assistance was provided for installation of Rooftop Solar Power Plant in Residential, Social, Government and Institutional Sector. Initially, when the cost of installation of Rooftop Solar was high, financial assistance was provided for the installation of Rooftop Solar by the commercial and industrial sector also. However, in March 2016 when the cost of installation Rooftop Solar come down from more than Rs.1,00,000/- per kWp to Rs. 75000/- per KWp, financial assistance for commercial and industrial sector was discontinued. As the cost of installation of Rooftop Solar has further reduced to around Rs. 50,000/ per KWp, financial assistance for the Institutional and Social Sector has been discontinued since February 2019. Since solar power for such category of consumers will be cost effective as compared to grid tariff applicable for these category consumers, therefore, it makes economic sense for them to go for solar power.

2.4 Most of the Central Government buildings have ample shade free rooftop space which can be utilized for installation of RTS. For installation of 1 KWp of RTS around 10 Sq. Meter of shade free area is required. Installation of RTS in Central Government buildings will help in reduction of power bills of the Central Government Departments/Organizations/ Institutions, since solar power for such category of consumers will be cost effective as compared to grid tariff applicable for this category consumers; and it will lead to a reduction in our carbon footprint.

3. Proposal

3.1 Grid Connected RTS power plants can be installed in two modes; viz.

(i) CAPEX /Ownership mode where investment is made by Rooftop owner and bids are invited on total project cost and

(ii) Renewable Energy Service Company (RESCO)/PPA mode where Project investment is made by private developer, with no investment required by the roof top owner, and bids are invited on tariff to be charged by developer for recovering the investment. Under this model, Power Purchase Agreement (PPA) is to be signed by the Rooftop owner with the developer. RESCO mode is generally available with large size of RTS say 50 KWp and more at one site. As most of the Central Government office buildings will have an area of 500 Sq. Meter and more for installation of 50 KWp or more RTS plant, therefore, these offices can avail the facility of RESCO mode.

3.2 Installation of RTS plant in RESCO mode will be beneficial in more than one way. Firstly, no capital cost will be involved. Secondly RESCO developer will take the responsibility of the operation and maintenance for the entire period of PPA, which is generally for 25 years. As proper maintenance of the plant will enhance the power generation resulting in more revenue for the RESCO Developer, therefore, he will be motivated for the proper maintenance of the RTS plant. Thirdly, there will be financial saving as the tariff for this category of consumer is usually greater than Rs. 5 per unit and in some cases (industrial, commercial and institutional), going up even upto Rs. 10 per unit, whereas the power through RESCO mode will be available in the range of Rs. 3 to Rs. 4 per unit Therefore, power generated through RTS plant would result in significant reduction of the electricity bill paid by them to the DISCOMs, hence making it an economically viable solution.

3.3 All Central Ministries and Departments including PSUs, attached and subordinate offices under central Ministries/Departments can implement the scheme under CAPEX mode (if they have surplus capital available for investment) or RESCO mode. If they opt for RESCO Mode then they can call for bids on their own or through SECI, an expert PSU under the MNRE or any other PSU having experience in this

advantage of having bids through SECI is that it will be able to aggregate the demand of various Government Departments and offer a higher capacity in the tender. Bids with higher aggregated capacity will attract lower tariff under RESCO mode. Therefore, it is imperative for the central Ministry/Department to first aggregate the RTS capacity which can be installed in all the buildings/offices under their control and then invite the bids either on their own or take assistance of SECI or any other PSUs. which have experience of implementing the RTS programme.

3.4 All the central government Ministries/Departments including the PSUs, attached and subordinate offices, autonomous bodies, organizations, institutions and field offices under their control may be directed to install grid connected RTS in all the central Government buildings including the Public Sector Undertakings (PSUs), autonomous bodies, attached offices, institutions etc. under their administrative control by the year 2022. This will not only help in achieving the target of 175 GW of Renewable Energy by the year 2022 but will lead to reduction in carbon emission and reduction in the electricity bills of the Government buildings. In case of Ministries/ Institutions opting for RESCO mode, MNRE may also be authorized to formulate the Bid Document and PPA which would be binding on these Ministries/ Institutions, requiring no further approval in these Ministries/ Institutions.

4. Justification

4.1 To speed up installation of RTS power plants on central Government buildings, MNRE pursued identification of rooftop space and vacant areas in Government / PSU buildings with various Ministries/ Departments. Data of about 55 Ministries and Departments compiled in the year 2015 indicates RTS potential of more than 5500 MW. Commitment was received in May 2016 from 52 Central Ministries for installation of about 3900 MW of Rooftop Solar Plant by the year 2021-2022.

4.2 Hon'ble Minister of State (I/C) for Power and New and Renewable Energy has also written to all the Central Ministers for installation of the RTS plants on the Government buildings. To support RTS power plants in Government/ PSU sector, MNRE had provided financial incentive in Phase-I of Rooftop Solar Programme which has been discontinued now in Phase-II. With this financial incentive more than 400 MW of RTS capacity has been reported installed in the Government sector including Central and State Government. However, there is still a huge potential which has remained untapped, which is evident from the fact that only 400 MW of RTS has been reported installed in the last three years against an estimated potential of more than 5500 MW. This may due to various reasons, mainly the lack of clear directions from parent Ministry, non-availability of budget for installation under CAPEX mode, delayed internal Ministerial approvals on the Power Purchase Agreements (PPA), etc. Therefore, the directions with the backing of the Cabinet decision will help in tapping of the huge potential of the RTS on the central Government buildings.

5. Inter-Ministerial Consultation

Draft cabinet note will be circulated among all the central Ministries/Department seeking their comments and the same will be appropriately incorporated in the final Cabinet Note to be submitted for the consideration of the Cabinet.

6. Financial Implications

This proposal involves no direct financial implications for MNRE. Central government Ministries/Departments including the PSUs, attached and subordinate offices, autonomous bodies, organizations, institutions and field offices will not have to incur any expenditure if the RTS plants are installed under RESCO mode. However, in case any Ministry/ Institution opts for CAPEX mode, then it will have to make required budgetary provisions in appropriate head of accounts and take appropriate approval as per prescribed financial procedures.

The direction to the central government Ministries/Departments including the PSUs, attached and subordinate offices, autonomous bodies, organizations, institutions and field offices will have substantial environmental impact in terms of savings of CO_2 emissions. Considering average energy generation of 1.5 million units per MW, it is expected that addition of 5 GW solar rooftop plants by all Central Ministries and Departments by year 2022 will result in CO_2 emission reduction of about 6 million tons per year.

8. Employment Generation Potential

The scheme has direct employment potential. As per available studies, around 24.72 job years are created per MW of small capacity solar installation. Therefore, besides increasing self-employment, the proposal is likely to generate employment opportunity equivalent to 1.24 lakh job years for skilled and unskilled workers for addition of 5 GW capacity by the year 2022.

9. Proposal for the Approval of the Cabinet

Approval of Cabinet is sought for the following:

I) Directions to all the Central Government Ministries/Departments including the PSUs, attached and subordinate offices, autonomous bodies, organizations, institutions and field offices under their control for mandatory installation of Grid Connected Rooftop Solar (RTS) on the Government buildings all over the country by the year 2022.

II) Authorizing MNRE to finalize the Bid Document and Power Purchase Agreement which shall be mandatorily applicable to all Ministries/ Institutions opting for RESCO Mode.

III) Authorizing MNRE to prepare, finalise and issue implementation and monitoring guidelines/modalities in consultation with stakeholders and to monitor the progress of implementation.

10. A Statement of Implementation Schedule is given at **Appendix I** (Page No.8)

11. A Statement on Equity, Public Accountability and Innovation is given at **Appendix-II** (Page No.9)

12. A Statement on Major Milestones and Corresponding Target Dates is given in **Appendix-III** (page no.10)

13. This Note has the approval of the Minister of State (I/C) for Power and New & Renewable Energy and Minister of State for Skill Development and Entrepreneurship.

14/02/2020

(Amitesh Kumar Sinha)
Joint Secretary to the Government of India
Tel. No. 011- 24362288

APPENDIX-I
(Refer para 10 at page)

STATEMENT OF IMPLEMENTATION SCHEDULE

Subject: All the Central Government Ministries/Departments including the PSUs, attached and subordinate offices, autonomous bodies, organizations, institutions and field offices to mandatorily install Grid Connected Rooftop Solar (RTS) on the Government buildings under their control all over the country by the year 2022.

Gist of decision required	Project benefits/results	Time-frame and manner of Implementation / Reporting to Cabinet Secretariat.
1.Mandatory installation of Grid Connected RTS by all the central Ministries/Departments in the Government buildings including the PSUs, attached and subordinate offices, institutions and field offices under their control all over the country by the year 2022. 2. Authorizing MNRE to prepare, finalise and issue implementation guidelines /modalities in consultation with stakeholders and monitor the progress of implementation.	Achievement of these targets would not only contribute to long term energy security of country and ecological security by reduction in carbon emissions and carbon foo tprint, but also generate large direct and indirect employment generation opportunities in solar and allied industries like inverter, meters, cables, mounting structure, glass, metals, heavy industrial equipment etc.	MNRE will prepare the draft Bid Document/ PPA for RESCO mode, implementation and monitoring Guidelines /modalities within 30 days of approval of Cabinet and after that implementation schedule as given in **Appendix III** will be followed.

14/01/2020

(Amitesh Kumar Sinha)
Joint Secretary to the Government of India
Tel. No. 011- 24362288

APPENDIX-II
(Refer para 11 at Page)

Statement on Equity, Public Accountability and Innovation

Subject: All the Central Government Ministries/Departments including the PSUs, attached and subordinate offices, autonomous bodies, organizations, institutions and field offices to mandatorily install Grid Connected Rooftop Solar (RTS) on the Government buildings under their control all over the country by the year 2022.

S.No.	The Required Goal	How does the Proposal Advance this Goal
1.	Equity or inclusiveness	On an average a 1.0 MWp size solar rooftop power plant can generate about 1.5 million units of electricity per year. This will result in providing clean energy thereby saving the environment.
2.	Public Accountability	Accountability will be ensured by proper monitoring of the systems. MNRE officials/ Experts/Consultants will visit the project sites and third party inspection will be carried out to ensure implementation of the programme as per approved guidelines. Public accountability is proposed to be encouraged by involvement of expert agencies and technical assessment.
3.	Innovation	Renewable energy technologies are evolving continuously and the proposal will support induction of latest technologies to ensure maximum cost reduction. The project developers, beneficiaries Government Offices will be motivated to use more RTS plants and use other technical measures to reduce capital and recurring costs, without lowering the plant performance.

14/01/2020

(Amitesh Kumar Sinha)
Joint Secretary to the Government of India
Tel. No. 011- 24362288

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STATEMENT ON MAJOR MILESTONES AND TARGET DATES

Subject: All the Central Government Ministries/Departments including the PSUs, attached and subordinate offices, autonomous bodies, organizations, institutions and field offices to mandatorily install Grid Connected Rooftop Solar (RTS) on the Government buildings under their control all over the country by the year 2022.

Major milestone in Mandatory installation of Grid Connected Rooftop Solar Power Plants in all the Central Government Buildings across the country to be as follows:

Sr. No.	Major milestone (Key Activities)	Time Frame for completion/ Target date
1	Communication to all the Central Ministries/ Departments along with the operational guidelines for implementation of the Cabinet decision	31.03.2020
2	Aggregation of the available space by all the central Government Ministries/Departments in the Government buildings under their control	30.06.2020
3	Installation of GCRT plant in at least 25% of the identified and available space	31.03.2021
4	Installation of GCRT plant in at least 75% of the identified and available space	31.03.2022
5	Installation of GCRT plant in 100% of the identified and available space	31.12.2022

14/01/2020

(Amitesh Kumar Sinha)
Joint Secretary to the Government of India
Tel. No. 011- 24362288