

GOVERNMENT OF THE UNION TERRITORY OF
PUDUCHERRY

SOLAR ENERGY POLICY-2015

1.0 Preamble:

- 1.1. Energy is one of the key driving forces of socio-economic development and change. Long-term energy security is therefore, an essential element of sustainable development. The rapid depletion of non-renewable energy sources and the adverse effects caused to the globe by the process of extracting energy from fossil fuels call for urgent solutions while demand for energy will keep increasing. The universally accepted view is that only energy from renewable sources offer a solution for a sustainable energy future.
- 1.2. The Government of India has launched the Jawaharlal Nehru National Solar Mission (JNNSM) under the National Action Plan for Climate Change (NAPCC) to promote ecologically sustainable growth while addressing India's energy security challenges. The objective of the National Solar Mission is to establish India as a global leader in solar energy, by creating the policy conditions for its diffusion across the country as quickly as possible.
- 1.3. The Union territory of Puducherry comprises of four erstwhile French settlements viz., Puducherry, Karaikal, Mahe and Yanam, which are unconnected regions. The Union Territory is fast developing with significant growth in socio-economic development. There will be a continuous increase in energy demand from all sectors. To meet the increasing energy demand in a sustainable manner, it is essential that the Government of Puducherry formulates and implements energy policies that are driven by a clear vision and implemented through the participation of all stakeholders.
- 1.4. This Puducherry Solar Energy Policy intends to create a framework that enables the development of solar energy in the Union territory of Puducherry.

2.0. Solar Energy Potential in the Union territory of Puducherry:

- 2.1. The four regions of the Union Territory of Puducherry have an average solar irradiance of 5.6-6.0 kWh / square meter / day and about 300 sunny days in a year, therefore, offering a good solar energy potential.

GOVERNMENT OF PUDUCHERRY
CHIEF SECRETARIAT (ENVIRONMENT)

(G.O. Ms. No. 2/2016-Envt., dated 19th February 2016)

ORDER

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This Puducherry Solar Energy Policy intends to create a framework that enables the development of solar energy in the Union territory of Puducherry. The Solar Energy Policy-2015 framed by the Government of Puducherry which is appended to this Order is published for the information of all stakeholders.

(By order of the Lieutenant-Governor)

S. THAMMU GANAPATHY,
Deputy Secretary to Government (Envt.).

- 2.2. The urban areas of the Union territory of Puducherry lend themselves well to the installation of (rooftop) grid-connected solar PV systems.
- 2.3. The rural areas of the Union territory of Puducherry have excellent electricity grid penetration, therefore, also offering good opportunities for grid-connected solar PV systems.

3.0. Solar Energy Vision:

- 3.1. Solar energy will be a major contributor to a sustainable energy future for the Union territory of Puducherry.
- 3.2. Solar energy development will be part of an overall energy strategy that includes demand side management, energy conservation, energy efficiency initiatives, distributed renewable energy generation and smart grid.
- 3.3. The Union territory of Puducherry will achieve, or exceed, the solar energy portfolio obligations as may be determined by the Joint Electricity Regulatory Commission (for the state of Goa and Union Territories) (the "JERC") from time to time.
- 3.4. In the Union territory of Puducherry solar energy will be a mainstream energy source by 2025.

4.0. Solar Energy Policy Objectives:

- 4.1. Define clear and transparent policy governance.
- 4.2. Encourage public-private partnerships and joint ventures to mobilize investments in solar energy projects, manufacturing facilities, research and technology development.
- 4.3. Facilitate open access to the public electricity grid of the Puducherry Union Territory and thereby create opportunities for grid-connected distributed generation of solar power and smart grid solutions, such as the propagation of electric transport, in order to reduce the dependence on fossil fuels and urban air pollution
- 4.4. Encourage to set up solar energy plants in industrial, commercial and residential buildings.
- 4.5. Establish a 'Single Window System' for technical support, funding support and project clearance.
- 4.6. Create an investment-friendly environment that provides opportunities for private individuals, companies, local bodies, Government departments and others to contribute to and participate in

the generation of solar energy, particularly for the electricity consumer to become a "prosumer" (a producer-consumer).

- 4.7. Initiate information, communication and education measures for promoting solar energy.
- 4.8. Encourage and promote solar energy research and development through technical institutions in the Puducherry Union Territory.
- 4.9. Establish linkages with National and International institutions for active collaboration in development, demonstration and commercialization of solar technologies and systems.

5.0. Scope of the Solar Energy Policy:

- 5.1. The policy will be applicable to projects, programs and installations relating to both solar photovoltaic energy (solar PV) and solar thermal energy.
- 5.2. The policy will be in force from the date of notification and shall be reviewed for its efficacy every five years with the sole purpose of considering improvements that may expedite the realization of the Puducherry Solar Energy Vision.
- 5.3. The Puducherry Solar Energy Policies will be aligned with Various National policies and initiatives relating to the promotion of new and renewable energy

6.0. Solar energy implementation mechanisms:

- 6.1. The implementation of solar energy in the Puducherry Union Territory will include, but, not be limited to the mechanisms, facilities and initiatives listed below.
 - 6.1.1. *Solar energy gross feed-in and metering:* The solar energy is fed into the grid and sold to Electricity Department, Puducherry ("EDP") or other distribution licensee. In addition to the existing service connection meter that records the consumption of energy at the premises, an energy meter will be installed by EDP or other distribution licensee to record the energy fed into the grid. The solar energy fed into the grid will be purchased by EDP or other distribution licensee at the prevailing solar energy tariff as determined by the JERC. Under the solar gross feed-in mechanism, solar energy may also be sold to another distribution licensee or to a third party under the open access mechanism.

- 6.1.2. *Solar energy net-metering*: The solar energy is used for self consumption with the surplus, if any, being exported to the grid. A bidirectional service connection energy meter will be installed by EDP or other distribution licensee to record the imported, exported and net-imported energy for the purpose of net-metered billing. Solar net-metering will be available for all metered electricity consumers.
- 6.1.3. *Solar energy group net-metering*: To encourage solar plants on rooftops of buildings that cannot consume all of the energy generated locally, there shall be group net metering, whereby, surplus energy exported to the grid from a solar plant in excess of 100 per cent of imported energy at the location of the solar plant can be adjusted in any other (one or more) electricity service connection(s) of the consumer within the Puducherry Union Territory. The purpose of this provision is to help maximize the utilization of rooftop space for solar energy generation for consumers with multiple buildings and service connections.
- 6.1.4. *Solar energy virtual net-metering*: To give access to the solar net-metering facility for consumers who do not have a suitable roof for installing a solar system (e.g. residential consumers who live in apartments, consumers with shaded rooftops) there will be the facility of virtual net metering. In virtual net-metering consumers can be beneficial owners of a part of a collectively owned solar system. All energy produced by a collectively owned solar system will be fed into the grid through an energy meter and the exported energy as recorded by that meter will be *pro rata* credited in the electricity bill of each participating consumer on the basis of beneficial ownership. Collective ownership of solar plants may be established through Societies, Trusts or section 25 Companies or any other legal entity that safeguards the interests of participating consumers, including rights which are at par with the rights enjoyed by consumers who have solar net-metering with a solar system installed on their own roof.
- 6.1.5. *Solar energy systems for buildings*: Solar PV systems may be installed on rooftops of all categories of existing and new buildings connected to the grid of EDP's or other distribution licensee. Solar PV systems may also be installed on elevated structures and on ground mounted structures within the premises of a building.

- 6.1.6. *Solar energy systems on rented rooftops*: Developers may rent roofs from building owners and install solar PV systems on these roofs with solar energy gross feed-in, net feed-in or net-metering arrangement. The roof owners may be paid a fixed or a variable rent linked with solar generation as may be agreed upon between the roof owner and the project developer.
- 6.1.7. *Solar Energy Special Economic Zones and Solar Parks*: The Government will promote the development of Special Economic Zones for research, development and manufacture of solar energy products and systems. Suitable land will be identified for developing Solar Parks.
- 6.1.8. *Stand-alone and solar-wind hybrid systems*: In villages and habitats where grid connectivity is not feasible or not cost effective, off-grid solutions based on micro-grid and stand-alone solar PV, solar - wind hybrid solutions, solar street lights and lanterns will be taken up.
- 6.2. Other solar energy implementation initiatives will include:
- 6.2.1. Solar thermal (hot water, steam, drying, dehumidification) systems at institutions and industries to lower or eliminate the need for fossil fuels;
- 6.2.2. Solar water pumps, water purification systems and milk pasteurization plants;
- 6.2.3. Solar energy for cottage industries.

7.0. Sustainable Habitats and Buildings:

- 7.1. Solar passive building principle and technology will be encouraged through legislative measures.
- 7.2. Solar cities will be developed in the Union territory of Puducherry.
- 7.3. The Town and Country Planning Department in collaboration with local bodies shall amend their bye-laws with due mandatory provisions for solar water heating facilities in residential and commercial buildings.
- 7.4. All public buildings will be mandated to meet their energy requirements increasingly from solar energy.

8.0. Land for Solar Energy Projects:

- 8.1. An inventory of surplus and unused land available with Public Sector Undertakings, the Union Territory of Puducherry Government, Urban and Local Bodies and Gram Panchayats will be undertaken region-wise by the Revenue

Department to identify lands for solar energy generation projects and the manufacture of renewable energy equipment.

- 8.2. The Government will make such identified lands available to the private sector through appropriate mechanism, such as long-term lease, etc.
- 8.3. The Government will either install solar power plants on all public buildings or rent, the roofs of these buildings to parties interested in investing in solar rooftop systems and selling solar electricity to the EDP or other distribution licensee.

9.0. Solar Energy Projects Implementation Facilitation and Incentives:

- 9.1. Renewable Energy Agency, Puducherry will facilitate the development of Solar Energy Projects in various modes including public, private, public-private partnership, build-own-operate-transfer (BOOT) modes on lands that have been provided with the requisite infrastructure for the development of Solar Energy Projects.
- 9.2. Statutory clearances that may be required for the development and commissioning of Solar Energy Projects will be facilitated by the Renewable Energy Agency, Puducherry with the concerned Government departments and agencies through a single window and time-bound process.
- 9.3. Generation of electricity from solar energy sources with gross solar energy feed-in and metering will be treated as an industry under the provisions of the industrial policy and incentives available to industrial units under such schemes will also be extended to all Solar Energy Power Projects.
- 9.4. Prosumers will be exempted from demand cuts, power cuts and other restrictions and controls provided that a minimum percentage of their annual energy consumption is generated from their solar energy system. Such minimum solar energy generation percentages will be determined by the Government of Puducherry for each year in relation to the REPO (Renewable Energy Purchase Obligation) targets fixed by the JERC.
- 9.5. Renewable Energy Agency, Puducherry will facilitate and expedite access to various concessions and incentives provided by the Ministry of New And Renewable Energy, Government of India including capital cost subsidies, where applicable.

9.6. Financing of solar energy projects is expected to be mainly from the private sector. However, the Government of the Union territory of Puducherry may consider providing incentives for private sector investments in solar energy which may take the form of sales tax reductions, soft loans or other modalities.

9.7. Renewable Energy Agency, Puducherry will provide project development and technical advice and assistance to Government departments and agencies for the implementation of Solar Energy Projects.

9.8. Renewable Energy Agency, Puducherry will undertake quarterly review of progress of Solar Energy Projects under development and facilitate speedy clearances and approvals if necessary.

9.9. Solar energy equipments will be exempted from VAT (Value Added Tax) for a period of five years as may be notified by the Government of Puducherry.

10.0. Grid Connectivity:

10.1. EDP or other distribution licensee and Renewable Energy Agency, Puducherry will jointly undertake the survey of LV, HV and EHV substations and required transmission and distribution lines necessary for the Solar Energy Projects.

10.2. EDP or other distribution licensee will undertake the augmentation of distribution and transmission lines, cables and other infrastructure as required. The cost of any augmentation required after the interconnection point of the solar power system with the service connection (in the case of net-metering) or feed-in point with the grid of EDP or other distribution licensee shall be borne by EDP or the concerned distribution licensee.

10.3. The Government will undertake to develop and maintain sufficient grid capacity for the evacuation, distribution and consumption of solar energy and will ensure to be ahead of solar energy development in this regard.

10.4. All solar energy generated and delivered to the Puducherry Electricity Grid will be purchased by EDP or other distribution licensee at feed-in tariffs fixed by the JERC or credited in the case of solar net-metering.

- 10.5. All solar energy prosumers and producers will be given open access to the Puducherry Electricity Grid for the sales of energy to EDP and sales to other distribution licensees and third parties. Grid access will be provided at all voltage levels.
- 10.6. Solar energy will be exempted from grid connectivity, open access, wheeling and banking, and cross-subsidy charges.
- 10.7. Solar energy can be wheeled and banked as per the JERC regulations.
- 10.8. All grid-connected solar PV systems shall be treated as "Must-Run" power plants and shall not be subjected to merit order despatch principles.
- 10.9. From April 2016 onwards, all new service connection meters in the Puducherry Union Territory shall be configured for bidirectional energy recording and display, so that all new service connections and existing service connections for which the meters are replaced in the normal course of maintenance are ready for effecting solar energy net-metering at any time in the future.

11.0. Solar Energy Agreements:

- 11.1. Prosumers and solar energy producers who opt for the solar energy gross metering facility will enter into a Solar Power Purchase Agreement (the "SPPA") with EDP, another distribution licensee or a third party as the case may be. The payment obligations of EDP or other distribution licensee under the SPPA shall be covered by an irrevocable revolving letter of credit for the duration of the SPPA to ensure timely payment for the purchase of solar energy from the prosumer or producer.
- 11.2. Prosumers who opt for the solar net-metering facility will enter into a Solar Energy (Group / Virtual) Net-Metering Agreement with EDP or other distribution licensee.
- 11.3. Prosumers and solar energy producers who opt for the wheeling and banking facility will enter into a Solar Energy Wheeling and Banking Agreement with EDP or other distribution licensee.
- 11.4. All transactions between the EDP or other distribution licensees and solar energy producers involving sale of power will be as per the guidelines of JERC.

12.0. Skill Development, Training and Awareness Programs:

- 12.1. Renewable Energy Agency, Puducherry will work with educational institutions and skill development agencies to develop and implement solar energy related skill development programs.
- 12.2. Renewable Energy Agency, Puducherry will organize periodical solar energy installation and maintenance training programs for electrical contractors, electricians and installers.
- 12.3. Renewable Energy Agency, Puducherry will undertake publicity and awareness programs, workshops and exhibitions to promote and popularise energy efficiency and energy conservation measures and the use of renewable energy sources.

13.0. Monitoring and Coordination:

- 13.1. An Inter-Departmental Monitoring and Coordination Committee for new and renewable energy sources, including solar energy (the "Renewable Energy Committee") shall be constituted by the Government for monitoring the implementation of this policy and to ensure that policy objectives and targets are achieved.

14.0. Miscellaneous:

- 14.1. The Government of Puducherry will have powers to amend / relax / interpret any of the provisions under this policy.
- 14.2. The provisions of this policy are subject to regulations, tariffs and guidelines of the JERC as issued from time to time.