# <u>Uttar Pradesh Rooftop Solar Photovoltaic Power Plant</u> <u>Policy, 2014</u>

# **Table of Contents**

1-	PREAMBLE	-	1
2-	OBJECTIVES	-	1
3-	OPERATIVE PERIOD	-	1
4-	IMPLEMENTATION PLAN	-	2
5-	ELIGIBLE ENTITIES	-	2
6-	TARGETS	-	2
7-	SUBSIDY	-	3
8-	ROLE OF NODAL AGENCY	-	3
A	FACILITATION IN AVAILING SUBSIDY/SUPPORT	-	3
В	EMPANELMENT OF SYSTEM INTGERGRATOR(s)	-	3
C	IDENTIFICATION OF SITES OF DEPLOYMENT OF SOLAR POWER CAPACITIES	-	3
D	ALLOTMENT OF THE SOLAR POWER CAPACITIES	-	3
E	SUPPORT IN ESTABLISHING PROTOCOLS/ PROCEDURES FOR EASY ADOPTION OF SOLAR POWER	-	3
F	RECOMMEND AND SPECIFY FEE AND CHARGE	-	3
	DECLARATION OF GOVERNMENT ORDER	-	3
	SUPPORT IN DEVELOPMENT OF REGULATORY FRAMEWOR	K-	4
I	APPROVAL FROM EMPOWERED COMMITTEE	-	4
9-	METERING ARRANGEMENT	-	4
10-	EVACUATION VOLTAGE	-	4
11-	PROCEDURE FOR INTERCONNECTIVITY WITH THE GRID	-	4
12-	FINANCIAL ARRANGEMENTS	-	4
13-	EMPOWERED COMMITTEE	-	4
14-	FREQUENCY OF MEETINGS	-	5
15-	FUNCTIONS OF THE EMPOWERED COMMITTEE	-	5

#### Uttar Pradesh Rooftop Solar Photovoltaic Power Plant Policy, 2014

#### **Preamble**

The State of Uttar Pradesh is among the top consumers of electricity per annum. With the depleting coal reserves and inadequate supply of other fuel, all possible viable options for the generation of the electricity need to be explored. Under these circumstances, the power generation based on renewable energy resources can play a significant role in meeting State's future demands of electricity.

The State has vast potential for deployment of plants utilising Solar Energy. The State receives daily average solar radiation in the range 5.0 kWh/sqm –5.5 kWh/sqm, in most of its part, offering opportunity for deployment of suitable solar energy facilities. Accordingly, the Government of Uttar Pradesh has formulated Solar Power Policy – 2013 for deployment of megawatt scale grid connected solar power plants.

The Government of Uttar Pradesh is equally committed to promote the deployment of rooftop solar photovoltaic plants. Keeping into consideration the potential benefits of deployment of rooftop solar photovoltaic plants, which includes reducing dependence on fossil fuel based generation, optimal utilisation of spaces on rooftops and wasteland around the buildings, savings on investment in transmission and distribution infrastructure, savings on reducing the network losses, reduced cost for managing the scheduling of electricity etc., the Government of Uttar Pradesh hereby declares and adopts the **Uttar Pradesh Rooftop Solar Photovoltaic Power Plants Policy**, **2014** as under,

#### 2. Objectives

The State Government introduces the policy with the following objectives,

- 1. To contribute to solar capacity addition and energy security
- 2. To optimally utilize the available solar energy resource in the State
- 3. To encourage development and promotion of environment benign solar energy generation contributing to sustainable development
- 4. To enable stakeholders in reducing greenhouse gas emissions
- 5. To attract private sector participation in solar energy sector
- 6. To build favorable environment for setting up grid connected rooftop solar photovoltaic power plants
- 7. To contribute investments in manufacturing, research & development in solar energy sector
- 8. To enhance skills and create employment opportunities
- 9. To contribute to productive utilization of available sites
- 10. To spread environmental awareness amongst the general public of Uttar Pradesh

#### 3. Operative Period

- 1. The policy shall come into effect from date of issuance and shall remain valid until superseded or modified till March 2017 whichever is earlier.
- 2. Rooftop solar photovoltaic power plants installed & commissioned during the operative period shall become eligible for the incentives declared under this policy.

#### 4. Implementation Plan:

- a) The State shall encourage implementation of the grid connected rooftop solar photovoltaic power plants for captive or self-consumption on net energy metering/net energy billing mechanism.
- b) Rooftop Solar Photovoltaic Power Plants are proposed to be promoted under Net energy metering mechanism upto 50 KW and Net energy billing mechanism above 50 KW.

#### **Government/Public Institutions**

- i) The Government of Uttar Pradesh shall promote deployment of rooftop solar photovoltaic plants for captive/self-consumption on the offices of the government organisations/ State government owned or aided institutions.
- ii) All the aforementioned institutions shall implement grid connected rooftop solar photovoltaic power plant and generate & consume some percentage of their annual electricity consumption from such plant.
- iii) The rooftop solar photovoltaic power plant shall be implemented utilizing at least 25% of the available plinth area.
- iv) Funds from the Government of Uttar Pradesh, may be made available for implementation of Grid connected Rooftop Solar Photovoltaic Power Plant.

#### **Private Institutions**

i. The Government of Uttar Pradesh shall encourage the private institutions to implement rooftop solar photovoltaic power plant, of suitable capacity, on the roof of their premises/area, generate & consume the electricity for their self-consumption.

# 5. Eligible Entities:

Any person, which shall include any company or body corporate or association or body of individuals, whether incorporated or not, shall be eligible to set up rooftop solar photovoltaic power plant and approach Uttar Pradesh New and Renewable Energy Development Agency for implementation of such power plants. Provided that such plants are set up for the purpose of captive use/self-consumption of electricity and such plants comply with the technical standards and specifications, if any, specified by the Central/State Government. or through its nominated nodal agency.

#### 6. Targets

The State shall strive to achieve the objectives of the policy and aim at implementing grid connected rooftop solar photovoltaic power plants during the operative period as per the following table,

Description	Unit	by FY 2016-17
Public Institutions	MW	10.0
Private Institutions	MW	10.0
Total	MW	20.0

Provided the Government of Uttar Pradesh shall review the targets from time to time and may regulate the targets as per the development of solar energy segment in the State.

#### 7. Subsidy

State Nodal Agency Uttar Pradesh New and Renewable Energy Development Agency shall facilitate in availing Government of India subsidy, if available for implementation of such plants, to both Public and Private Institutions / organisations.

#### 8. Role of Nodal Agency

Uttar Pradesh New and Renewable Energy Development Agency shall be the Nodal Agency for implementation of grid connected rooftop solar photovoltaic power plant, and shall formulate scheme for facilitating implementation of rooftop solar photovoltaic power plants. The Nodal Agency shall facilitate the eligible entities in implementing the plants and undertake following activities,

#### A) Facilitation in availing Subsidy/Support

The Nodal Agency shall facilitate the eligible entity/UPPCL availing any subsidy or benefit made available, from time to time, by the Government of India or by the Government of Uttar Pradesh.

#### **B)** Empanelment of System Integrator(s)

The Nodal Agency shall empanel system integrator(s) for the implementation of target capacity identified under this policy. The Nodal Agency, from time to time, shall also review the performance of system integrator(s).

#### C) Identification of Sites for Deployment of Solar Power Capacities

The Nodal Agency shall facilitate the public institutions in identifying the feasible sites/roofs for deployment of rooftop solar photovoltaic power plants. The Nodal Agency may charge nominal fee for extending its services. The Nodal Agency shall provide suitable support to encourage deployment of solar power plants on sites/roofs under Private Institution category.

#### D) Allotment of the Solar Power Capacities

The Nodal Agency shall organize city-wise competitive bidding for the allotment of solar power capacities for implementation by system integrator(s).

# E) Support in establishing Protocols/Procedures for easy adoption of Solar Power

The Nodal Agency shall also support the distribution licensee in developing the protocols and procedures for metering, grid connectivity, and power purchase agreements etc. for easy adoption of solar power plants by the stakeholders.

#### F) Recommend and Specify Fee and Charge

The Nodal Agency shall recommend and specify, from time to time, and after consultation with the relevant stakeholders, fee and charges necessary to operationalize the framework.

#### G) Declaration of Government Order

The Nodal Agency, shall approach Government through Empowered Committee for declaration of Order to encourage deployment of rooftop solar photovoltaic power plant capacities.

#### H) Support in development of Regulatory Framework

The Nodal Agency shall approach Uttar Pradesh Electricity Regulatory Commission for announcement of appropriate regulatory framework for large scale deployment and adoption of rooftop solar photovoltaic power plants.

### I) Approval from Empowered Committee

Nodal agency will obtain approvals from time to time for implementation of policy guidelines and for carrying out bidding.

#### 9. Metering Arrangement

For rooftop solar photovoltaic power generation plants with proposed connectivity with the grid at above 415 V voltage level, the type of meters and metering arrangement shall be governed by Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 and Central Electricity Authority (Installation and Operation of Meters) Amendment Regulations, 2010 and any amendment thereof unless superseded by further notified regulations by Central Electricity Authority.

For rooftop solar photovoltaic power generation plants with proposed connectivity at 415 V or below voltage level, the type of meters and metering arrangement shall be governed by Central Electricity Authority (Installation and Operation of Meters) Amendment, Regulations, 2013 after notification by the Central Electricity Authority.

#### 10. Evacuation Voltage

The voltage of evacuation of electricity generated from solar power plants will be as under,

Capacity of the System	Evacuation Voltage
Below 5 kW	Single Phase, Low Voltage
> 5  kW - 50  kW	Three Phase, 415 V
> 50  kW - 2.0  MW	6.6 kV/11 kV
> 2.0  MW - 5.0  MW	11 kV/33 kV/66 kV (as per site conditions)

#### 11. Procedure for Interconnectivity with the Grid

The procedure for interconnectivity of solar power plants, developed under this Policy, with the grid shall be in accordance with the provisions laid by distribution licensee and as approved by Uttar Pradesh Electricity Regulatory Commission. The distribution licensee shall be required to submit the procedure(s) for interconnectivity of rooftop solar photovoltaic power plants with the grid for consideration and finalization by the Uttar Pradesh Electricity Regulatory Commission.

#### 12. Financial Arrangements

Funds will be provided by State Government in appropriate Budget head for carrying out detailed technical assessment and for deployment of solar rooftop solar photovoltaic power plants on Government owned and aided organization's of the State on annual basis.

#### 13. Empowered Committee

To oversee, monitor and resolve various issues arising out of this policy, an Empowered committee will be constituted under the chairmanship of the Chief Secretary of the State. The committee will have the following members:-

Chief Secretary -Chairman Infrastructure & Industrial Development Commissioner - Member Secretary / Principal Secretary, Additional Energy Sources - Member Secretary / Principal Secretary, Finance - Member Secretary / Principal Secretary, Planning - Member Secretary / Principal Secretary, Revenue - Member Secretary / Principal Secretary, Housing - Member Secretary / Principal Secretary, Energy - Member Managing Director, UPPCL - Member Managing Director, UPPTCL - Member Managing Director, Concerned DISCOM - Member Director, UPNEDA - Member Secretary

# 14. FREQUENCY OF MEETINGS

The committee shall meet on a quarterly basis and also as and when required.

#### 15. FUNCTIONS OF THE EMPOWERED COMMITTEE

- a Resolving key bottlenecks in implementation of grid connected rooftop Solar Photovoltaic Power Plants.
- B Granting permission for bidding for selection and empanelment of System Integrators for deployment of rooftop solar power plants.
- C Issues regarding facilitation of framework for interconnection with the grid.
- D Resolve any other Inter departmental issues that may arise from time to time.
- E Any other relevant issue.