

# **Uttar Pradesh Solar Energy Policy -2022**

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## **1 Preamble**

Growing concerns of global warming and climate change require emphasis on clean and green energy. The Government of India is committed to set up 50 percent cumulative power generation capacity from non-fossil fuel-based energy resources by the year 2030. The Government of Uttar Pradesh recognizes the current and potential impact of Climate Change and is committed to encouraging the promotion of clean energy sources.

Uttar Pradesh is endowed with vast Solar Energy resource and has potential to generate several gigawatts of solar power. State through this Policy plans to develop a holistic ecosystem to reap the full Solar Energy potential of the State.

To align with India's ambitious solar energy capacity extension program, the State envisages accelerating the deployment of solar power by means of implementation of utility-scale solar parks and projects, distributed Solar systems, establishment of ultra-mega solar parks and rooftop solar PV projects. These targets will be achieved by introducing new mechanisms that will support consumers, businesses and developers in the sector.

Policy shall also promote energy storage projects, bundling for solar projects with other generation sources etc. to deliver Round-the-clock power supply thereby ensuring grid stability in the long run.

Accordingly, State Government of Uttar Pradesh hereby declares and adopts Solar Energy Policy, 2022.

## **2 Vision and Objectives**

- 2.1** To provide access to reliable and sustainable solar energy in Uttar Pradesh.
- 2.2** To reduce the dependence on fossil fuels and achieve “optimal energy mix” of conventional and renewable power, ensuring energy security in the State.
- 2.3** To provide a conducive environment for private sector investment in the field of solar energy generation and storage. To encourage private sector participation and provide investment opportunities for deployment of solar energy.
- 2.4** Development of human resource for skill enhancement and generation of employment opportunities in the field of renewable energy.
- 2.5** To generate awareness amongst the masses regarding solar energy technology.

## **3 Title and Operative period**

- 3.1** This policy shall be known as “ **Uttar Pradesh Solar Energy Policy 2022**”
- 3.2** This policy shall come into operation from date of issuance and shall remain in operation for a period of five (5) years or till the Government notifies the new policy whichever is earlier.
- 3.3** The State Government may make necessary amendments or review this, Policy.

## **4 Definitions and Abbreviations**

In this Policy, unless the context otherwise requires:

- 4.1** "Act" means Electricity Act, 2003, including amendments thereof.
- 4.2** "CAPEX Mode" means the mode under which the entire investment for setting up the Solar Power Plant shall be made by the electricity consumer.
- 4.3** "CEA" means Central Electricity Authority;
- 4.4** "Central Agency" means National Load Dispatch Centre (NLDC) as designated by the Central Electricity Regulatory Commission vide Order dated 29.01.2010 for the purposes of the REC Regulations.
- 4.5** "CERC" means the Central Electricity Regulatory Commission, constituted under sub-section(1) of Section 76 of the Electricity Act,2003;
- 4.6** "CERC REC Regulations" means Central Electricity Regulatory Commission (Terms & Condition for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 notified by CERC vide Notification dated 14.01.2010 as amended from time to time;
- 4.7** "COD" means Commercial Operation Date, i.e. the date when the power generation plant becomes operational as per the rules/provision.
- 4.8** "CPP" or "Captive Power Plant" means Captive Power Plant as defined in Electricity Act, 2003 and Electricity Rules, 2005;
- 4.9** "DISCOM of Uttar Pradesh" means a distribution licensee of the State, such as MVVNL, DVNL, PVVNL, PuVNL, KESCO etc

- 4.10** "Financial Year" means a period commencing on 1st April of a calendar year and ending on 31st March of the subsequent calendar year;
- 4.11** "Generating Plant Sub-station" means Sub-station developed by the Solar Power Producer/Developer for interfacing with the receiving sub-station;
- 4.12** "Government" and "State" mean Government of Uttar Pradesh and the State of Uttar Pradesh respectively;
- 4.13** "Gross Metering" means methodology under which the entire electricity generated by the rooftop/ ground mounted Solar PV System set up in the premises of the consumer is delivered to the distribution system of the licensee
- 4.14** "ISTS" means Inter State Transmission System;
- 4.15** "Licensee" includes a person deemed to be a licensee under Section 14 of the Electricity Act, 2003;
- 4.16** "MNRE" means Ministry of New and Renewable Energy of Government of India, responsible to develop and deploy new and renewable energy for supplementary energy requirement of the country.
- 4.17** "Net Billing" means a single bi-directional energy meter used for net billing or net feed-in at the point of supply where in the energy imported from the grid and energy exported from the grid interactive solar photovoltaic system of a prosumer are valued at two different tariffs.

- 4.18** Net Metering” means the methodology under which electricity generated by the Rooftop/Ground mounted Solar PV System setup in the premises of a consumer under the CAPEX/RESCO mode is primarily for self consumption, and the surplus generated electricity, if any, is delivered to the distribution licensee which will be off-set against the electricity supplied by the distribution licensee to the consumer during the billing cycle;
- 4.19** “Nodal Agency” means UP New and Renewable Energy Development Agency (UPNEDA)
- 4.20** “Person” means an individual or a firm/ company registered under the Companies Act 1956;
- 4.21** "PPA" means Power Purchase Agreement;
- 4.22** “Project Capacity” shall mean the maximum Alternating Current(AC) capacity at the delivery point in MW.
- 4.23** “Renewable Energy Certificate” or “REC” means the Renewable Energy (Solar) Certificate issued by the Central Agency in accordance with the procedure prescribed by it and under the provisions specified in this regard by the Central Electricity Regulatory Commission (Terms & Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations,2010 and its amendment thereof;
- 4.24** “UPERC”/"Commission" means Uttar Pradesh Electricity Regulatory Commission;

- 4.25** “RESCO Mode” means the methodology in which entire investment is to be incurred by a company/individual other than the consumer for setting up of the solar power project in the consumer premises and the consumer pays for the electricity generated from such solar power project at mutually agreed tariff to such investor company/individual;
- 4.26** “RPO” means Renewable Purchase Obligation;
- 4.27** "SECI" means the Solar Energy Corporation of India;
- 4.28** “Solar Power Park Developer” means a person who develops and/or maintains solar parks and the related common infrastructure facilities;
- 4.29** "Solar Power Producer/Developer" means a person that makes an investment for setting up of solar power project and generating electricity from solar energy;
- 4.30** “Solar Plant/Solar Power Plant” means a power plant or system utilizing solar energy through solar photo-voltaic or concentrated solar thermal devices for generating electricity
- 4.31** Solar PV Power Plant ”means Solar Photovoltaic (SPV)Power Plant that uses sunlight for direct conversion into electricity through Photovoltaic technology;
- 4.32** Tariff” means the schedule of charges for generation, transmission, wheeling and supply of electricity together with terms and conditions for application there of;
- 4.33** “State Agency” means Uttar Pradesh New and Renewable Energy Development Agency or any other agency designated by the Uttar Pradesh Electricity Regulatory Commission for accreditation and recommending the Renewable Energy Project for registration with Central Agency in accordance with the procedure prescribed by it and under the provisions specified in the CERC REC Regulations;



**4.34** "Start-ups" shall have the same definition as defined by Department of Promotion of Industry and internal trade, Ministry of commerce and Industry , Govt of India as amended from time to time .

**4.35** The terms not defined above will have their usual meanings.

## **Abbreviations**

**4.36** CRE Regulation 2019 – Captive and Renewable Energy Regulation

4.37 MNRE – Ministry of New and Renewable Energy

4.38 PPA - Power Purchase Agreement

4.39 PM Kusun Yojana – Pradhan Mantri Kisan Urja Suraksha Evam Utthan Mahabhiyan Yojana

4.40 RSPV Regulation- 2019 – Rooftop Solar Photovoltaic Regulation 2019

4.41 RESCO – Renewable Energy Supply Company

4.42 RPO – Renewable Purchase Obligation

4.43 STU – State Transmission Utility

4.44 UPPCL – Uttar Pradesh Power Corporation Limited

4.45 UPPTCL – Uttar Pradesh Power Transmission Corporation Limited

4.46 UPSLDC – Uttar Pradesh State Load Dispatch Center

4.47 UPERC – Uttar Pradesh Electricity Regulatory Commission

4.48 VGF - Viability Gap Funding

## 5 Policy Target

The Policy aims to achieve a target of 22,000 MW Solar Power Projects up to 2026-27 in the State as under:

S No.	Particulars	Capacity
1	Utility Scale Solar Projects/Parks	14000 Megawatt
2	Solar Rooftop Projects	
a)	Solar Rooftop (Residential)	4500 Megawatt
b)	Solar Rooftop (Non-residential institutions)	1500 Megawatt
3	Distributed Solar Generation (PM KUSUM component C1 & C2)	2000 Megawatt
4	Employment Generation/ Skill development	30,000 No's

**5.1** Uttar Pradesh Power Corporation Limited (UPPCL) through its Discoms will purchase the solar power generated under PM Kusum scheme component C and Solar Rooftop Systems. UPPCL/Discoms will purchase the solar power generated by the utility scale solar power projects/parks as per Renewable Purchase Obligation (RPO) determined by Uttar Pradesh Electricity Regulatory Commission (UPERC) and in view of the commercial interest of the Corporation.

**5.2** Setting up of Solar Power Projects to sell power to third party or for captive use will be promoted in State.

**5.3** This Policy aims to promote Solar Energy by:

- a) Development of Solar Parks.
- b) Solarization of segregated agriculture electrical feeders by setting up grid connected small decentralized solar power projects and solarization of private on-grid pumps

- c) Promoting solar installations on the sides of expressways and Railway tracks.
- d) Promotion of floating/canal top/ reservoir top or any water body solar power projects.
- e) Promotion of Solar Energy projects with storage systems.
- f) Promotion of Rooftop Solar Projects through Net Metering, Net billing and Gross Metering mechanism or any other manner as per the provisions of Electricity Act, 2003 and relevant Regulations/Orders issued by UPERC.
- g) Promotion of Off-Grid Solar applications like Solar Water Pumps, home lighting systems, water heater, etc.
- h) Strengthening of Transmission Network for evacuation of Solar Projects by development of Green Energy Corridor in Bundelkhand region.
- i) Promotion of manufacturing industries of solar energy equipment.

## **6. UPNEDA as Nodal Agency**

Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA) will be the nodal agency for implementation of this policy. The Nodal Agency will facilitate and assist the project developers and under take the following activities to achieve the objectives of the policy.

### **6.1 Registration of Solar Projects**

- a) On behalf of Government of Uttar Pradesh will act as a single window for completion of all type of solar projects.
- b) Registration charges as stipulated from time to time will be payable by Developers/firms.
- c) UPNEDA will issue registration certificate which will facilitate the developer/firms to coordinate with line departments like Discom, Transmission, Revenue Department, Stamp, Electrical Safety, Pollution Control Board, Irrigation Department, Generation Companies, Fire Protection Department etc
- d) For approval of Solar Power Projects will carry out competitive bidding, execution of PPA, statutory clearances, and coordinate with MNRE and other central /State Agencies, facilitation for approval of power evacuation plan and allocation of Bays.

### **6.2 Bidding of Projects:**

The Nodal agency will carry out all the tasks related to bidding process for Solar Power Projects in the state.

### **6.3 Facilitation for Government Land/Space**

Facilitate allotment of suitable land/space in control of State Government or its agencies.

- a) Land bank of land not suitable for agriculture and wasteland will be created by UPNEDA with consultation of District Collector in State.

- b) Gram sabha /panchayat and revenue land for providing on lease will be resumed in favour of additional sources of Energy Department.
- c) Land will be provided to the State Govt/ Central Govt PSUs or joint venture on lease for 30 years.
- d) Land will be provided on lease to State Government and Central Government undertakings at rate of Rs. 1 per acre per year for a period of 30 years. This land will be non-transferrable and if within three years of allocation land is not used for solar Power i.e. work is not initiated then land will be taken back mandatorily.
- e) Land will be provided on lease to private sector at rate of Rs. 15000 per acre per year for a period of 30 years. This land will be non-transferrable and if within three years of allocation land is not used for solar Power i.e. work is not initiated then land will be taken back mandatorily.

6.4 Nodal Agency will recommend for accreditation of Solar Power Projects under REC mechanism.

### **6.5 Training**

UPNEDA will organize training programs for skill development in the field of solar energy.

6.6 Mechanism for disbursement of various subsidies/ incentives to be provided under the policy will be formulated. Policy expert will be engaged for implementation of Solar Energy Policy and a single window clearance portal will be developed. Budgetary provisions will be made for implementation of this policy and for incentives provisioned under this policy.

## **7 Rooftop Solar PV Projects**

- a) The State Government will provide support and facilitation in installation of Solar PV Rooftop System in the State. Rooftop solar power plants will be set up in residential, government institutions and all educational institutions in the state under net metering arrangement.
- b) To promote installation of Grid connected Rooftop systems under Net-Metering arrangement in private residential sector, a “Saurya Uttar Pradesh Yojna” is proposed to be implemented during the policy period .Under this Yojna State Government will provide subsidy of Rs 15,000/kW to a maximum limit of subsidy Rs 30,000/- per consumer .This subsidy will be provided in addition to central financial assistance available from Government of India.
- c) Solar city will be developed in the state, in which emphasis will be laid on installation of solar rooftop and other related off-grid solar systems.
- d) Solar Rooftop capacity addition will be allowed by the DISCOM as per the installed distribution transformer capacity in accordance to the UPERC RSPV Regulation 2019 and amendments thereof.
- e) In every district, in order to provide support in installation of Solar Rooftop Power Plant and for providing assistance in the net metering facility of the plant a committee ( solar cell) is being constituted under the chairmanship of Chief district officer . This committee (solar cell) will consist of District level officers of UPNEDA besides DISCOM officers.
- f) MSME and Start-ups will be promoted for installation of Solar Rooftops.
- g) Innovative implementation models such as virtual net metering will be promoted for adoption and implementation of Solar Rooftop model. to encourage solar Rooftop installations in rural areas Standard Operating Procedure of MNRE will be implemented with respect to virtual Net metering.

## **7.1 Non Residential Institutions.**

The Government of Uttar Pradesh shall promote deployment of rooftop solar photovoltaic plants for captive/self-consumption under Net metering arrangement on the office buildings of institutions as follows: -

- a) State Government buildings/office buildings or premises under the control of the State Government/office buildings of the Government of India or other Provincial Government located in the State.
- b) Government and non-government educational institutions of all categories, which are regulated by the regulatory bodies of the Central Government / State Government.
- c) Net metering will not be allowed, in case above category institutions are operating in private rented building.
- d) Example: - State government schools, colleges, technical institutions and universities, all public institutions hostels, training institutions, libraries and establishments of Indian Railways located in the state, research and development institutions, holiday homes, guest houses, Inspection buildings etc. which come under the purview of the government. Government Schools, Colleges, Government Hospitals, Jails, Private Educational Institutions like Schools, Colleges, Universities, Nursing colleges etc .
- e) Installation of Rooftop solar photovoltaic plants through third party (RESCO mode) {Renewable Energy Supply Company} will be encouraged in these Institutes. In this arrangement power purchase agreement between consumer and Third Party (RESCO) will be executed and Net-Metering interconnection agreement between consumer and electricity Distribution Company will be executed.
- f) Institutions can install rooftop solar plants in RESCO mode by themselves or in consultation with UPNEDA. Consultancy fee 3% cost of the plant and applicable GST/other tax will be payable to UPNEDA.

- g) A revenue model will be developed for installation of systems whereby Nodal Agency, UPNEDA will play an active role in collection of demand for installation of Grid connected Solar Rooftop Power Plants. UPNEDA will develop model contracts, Standard PPA's and will carry out competitive bidding for discovery of tariff and selection of RESCO's for implementation of Grid connected Solar Rooftop Projects.
- h) As per RSPV Regulation -2019, issued by UPERC and amended from time-to-time, Net billing facility will be provided to industrial and commercial consumers. UPERC will determine the tariff for power purchase by Discom

## **7.2 Solar Rooftop in Residential Sector**

- a) The Government of Uttar Pradesh shall encourage installation of Grid connected rooftop solar power plant of suitable capacity in Residential buildings.
- b) A Solar City is defined as a city where minimum of 10% reduction in projected total demand of conventional energy at the end of five years is achieved from installation of renewable energy systems and through energy efficiency measures. Detailed project report will be prepared for each solar city which will include installation of solar rooftop, Solar high mast, Solar Street light, solar tree and solarization of water pumping stations, STP and other load centres of the city.
- c) Thirteen lakh fifty thousand residential houses will be covered with solar rooftop in Solar City during the operative period of policy.
- d) Ayodhya city will be developed as a model solar city under the Solar City programme. After assessing its success, sixteen Municipal Corporations of the State and Noida City will be developed as solar cities.
- e) In initial year of operation of policy, sixteen Municipal Corporations and Noida city will be provided with funds to the tune of Rs 50 per



person as per the census of year 2011 of Municipal Corporation area for developing as solar city as per definition of MNRE.

- f) This fund will be spent by Municipal Corporation on installation of solar energy systems in the city, so that demand in conventional energy can be reduced by 10 % from the solar energy produced by these systems.
- g) In three year duration of operation of policy, according to definition of solar city, Municipal Corporation which attains 10 % reduction in demand of conventional energy by installation of solar energy systems will be provided incentive of Rs 50 per person as per year-2011 census of Municipal Corporation area.
- h) This incentive amount will be spent by Municipal Corporations developed as a solar city only on installation of solar energy systems.
- i) As per RSPV Regulation notified from time to time by Uttar Pradesh Electricity Regulatory Commission, Net metering facility will be provided to the residential consumers.
- j) The time period for installation of residential rooftop solar system will be as follows-

<b>S.No</b>	<b>Activity</b>	<b>Responsibility</b>	<b>Maximum Time Period</b>
1	Submission of Application	Consumer	-
2	Acknowledgment of Application	DISCOM/UPNE DA	1 Day
3	Site Verification and technical feasibility	DISCOM	7 Days
4	Installation of Rooftop Solar System	Vendor	90 Days
5	Testing of Solar Power Plant and net metering	DISCOM	7 Days from Depositing of meter
6	Execution of net metering agreement	DISCOM	3 days from Submission of Draft

			agreement
7	Commissioning /connection of Rooftop system	DISCOM	3 days after net metering agreement
8	Issuance of Joint Commissioning Report	DISCOM, vendor and beneficiary	1 day after commissioning
9	Release of Central Financial assistance to consumers	MNRE	30 days after issuance of JCR
10	Release of State Financial assistance to consumers	UPNEDA	15 days after issuance JCR

### 7.3 Incentives

Following incentives shall be available on Grid connected Rooftop Solar PV Plants implemented by the eligible entities, as applicable, during the Operative Period of the policy.

- a) To promote installation of Grid connected Rooftop systems under Net-Metering arrangement on large scale in private residential sectors, State Government will provide subsidy of Rs 15000/KW to a maximum limit of subsidy Rs 30000/- per consumer. This Subsidy will be disbursed to beneficiary on reimbursement basis after successful installation and commissioning of Rooftop solar systems with net metering and submission of all documents to the State Nodal Agency (UPNEDA).
- b) This subsidy will be in addition to any Central Financial Assistance available from Ministry of New and Renewable Energy, Government of India which would be dispersed by State Nodal Agency. UPNEDA portal will be integrated with National portal for vendor registration and for direct beneficiary Transfer (DBT) of subsidy.
- c) As per provision in building byelaws, permission for construction of necessary structures on roof for installation of Solar Rooftop Power

Plant is exempted and necessary structures not more than 4.5 meters high constructed on roof for installation of rooftop solar plant will not be included in the height of the building.

- d) In case of multi storied buildings, residential colonies, commercial buildings, etc, Grid connected Solar Rooftop Systems could be installed for common facility area. This system will be applicable for common meter connection in society, bulk power connection or connection for common facilities therein, and, in other cases, without hindering or encroaching upon the lawful rights of the other occupants.
- e) Grid connected Solar Power Plants of capacity up to 10 kW, will be exempted from the inspection by the State Electrical Inspector.
- f) Solar Rooftops of maximum 2 Megawatt capacity are allowed to be installed as per RSPV Regulation -2019, issued by UPERC and amended from time-to-time.

#### **7.4 Metering Arrangement, Evacuation Voltage & Interconnection with the distribution system:**

Metering arrangement, evacuation voltage of electricity generated from Solar Power Plants and interconnection of the Rooftop Solar Power Plant with the network of the distribution licensee will be as per UPERC RSPV Regulations 2019 and as amended from time to time.

## **8 Off-grid Solar Applications**

**8.1** Installation of off-grid solar applications and hybrid systems will be promoted and encouraged in the state for domestic and commercial use and to meet various electrical and thermal energy requirements.

**8.2** Installation of off-grid solar systems such as solar power plants, solar street lights and solar PV pumps in Anganwadi centers, schools etc. will be promoted in the State

**8.3** State Government will promote installation of stand- alone Solar Power Pack systems to provide electricity to households in remote unelectrified villages/ hamlets of districts like Sonbhadra, Basti, Mirzapur and Bahraich etc. These standalone solar power pack systems will be made available as per the guidelines and standards issued by the central government under Saubhagya Yojana.

**8.4** Un electrified area will be selected on following priority:

- (i) Naxalite affected area
- (ii) Vantangia area
- (iii) Tribal/Mushar area
- (iv) Other village/hamlets

**8.5** Unelectrified villages and hamlets of the concerned district will be selected by the district level committee constituted under the chairmanship of the District Magistrate, which will have the following members: -

- |   |            |
|---|------------|
| 1- District Magistrate                    | - Chairman |
| 2- Chief development Officer              | -Member    |
| 3- District Panchayati Raj officer (DPRO) | -Member    |
| 4- Executive Engineer (Rural) Discom      | -Member    |
| 5- Project officer UPNEDA                 | - Member   |

6- District Forest Officer -Member  
(In case of Forest area related issue to be co-opted)

- 8.6** District level committee based on availability of budget will select eligible beneficiaries of Antyodaya card holders and thereafter BPL (below poverty line) card holders.
- 8.7** Solar Power pack provided will have provision of replacement of battery after five years.
- 8.8** Setting up of solar cold storage with the help of Agricultural University of State and Uttar Pradesh Mandi Vikas Parishad, will be promoted for increasing the shelf life of agricultural products and income of farmers.

## **9. Energisation at Feeder level from solar energy**

### **9.1 Solar Power Projects set up for sale of solar power to Distribution Licensee:**

UPPCL will purchase solar power to fulfil Renewable Purchase Obligation (RPO) target fixed by Uttar Pradesh Electricity Regulatory Commission. Solar Power Projects will be awarded through competitive bidding process as per Ministry of New and Renewable Energy (MNRE), Government of India guidelines.

#### **9.1.1 PM KUSUM C-1:**

Solarization of installed on-grid pumps will be carried out under MNRE PM KUSUM Yojna component (C-1) in State.

State Government will give 70% subsidy to the Scheduled Tribe, Vantangia and Musahar caste farmers. This subsidy will be in addition to subsidy available from central government. State government will give additional 60% subsidy to other farmers.

#### **9.1.2 PM KUSUM C-2:**

Solarization of Segregated Agriculture feeders will be promoted as per the provisions/guidelines issued under MNRE PM KUSUM Scheme Component (C-2) in State. State Government will provide maximum Viability Gap Funding (VGF) of Rs. 50 lakh per megawatt in addition to subsidy being provided by Central government.

Project allocation will be through Competitive bidding (VGF/Tariff based) as per the Guidelines of MNRE / State Government.

State can also take loan with consultation of Finance department from National/International financing institutions for successful execution of PM KUSUM Scheme.

### **9.1.3 Utility Grid Power Projects of capacity 05 megawatt and above 5 megawatt**

Minimum capacity of these projects at one location will be 05 Megawatt. Solar Power Projects will be awarded through competitive bidding process as per Ministry of New and Renewable Energy (MNRE), Government of India guidelines.

### **9.1.4 Incentives:**

For grid connectivity of Standalone Solar Power projects of capacity 5 MW and above proposed to be set up in Bundelkhand and Purvanchal region, State Government will bear the cost for construction of maximum transmission line length as follows:

- For 05 to 10 Megawatt capacity -10 Kilometer
  - For >10 megawatt to 50 megawatt capacity -15 Kilometer
  - For >50 megawatt capacity - 20 Kilometer.
- 
- Project developer may construct the transmission line on its own or through UPPTCL on deposit basis. This subsidy incentive will be provided by Nodal agency on reimbursement basis to Project developer after construction of transmission line, commissioning and on achievement of COD of Project. Subsidy amount payable as reimbursement to the solar project developer will be estimated on the basis of verification by Uttar Pradesh Power Transmission Corporation Ltd. / Distribution Licensee of transmission construction related works and of payments made for the same by Project developer.
  - Project Developer will bear the remaining cost for construction of transmission line, bay and substation along with cost of Grid strengthening work, if any.

- Other charges will be applicable as per the Regulations notified by Uttar Pradesh Electricity Regulatory Commission (UPERC) from time to time.
- Selected Project developer will select the site for setting up of Solar Project but final decision for the construction site of Solar Power Plant will be as per the location of substation communicated for Grid connectivity by UPPTCL.
- For solar project construction site proposed by the project developer, UPPTCL will consider Grid connectivity feasibility in view of substations planned in its ARR and such substations which are proposed to be upgraded.
- If the project developer does not install and commissions the solar project within two years after allocation of grid connectivity, UPPTCL shall be free to allocate to any other the said grid connectivity.
- Power pooling arrangement will be allowed in case of small capacity projects.

## **9.2 Solar Power Projects set up for sale of solar power to Third party or Captive use:**

Projects may be set up by the developers with the intention to sell power to third party or for 100% captive use or part captive use or group captive use and sell part generation to third party. Following incentives will be available to Projects set up under open access of capacity above 1 MW:-

- a) Metering for sale of solar power shall be done at STU/Distribution licensee substation end.
- b) Solar power project developer has to bear the cost of external transmission network and cost for strengthening of transmission system, if any.



- c) Within 90 days of Registration with Nodal Agency, Grid connectivity from STU for solar Power Projects will be facilitated subject to technical feasibility.

### **9.2.1 Exemptions**

- a) Exemption of 50 % on wheeling charges/transmission charges on Intrastate Sale of Power to third party or in case of Captive use. This exemption will be applicable as per technical feasibility and U.P. Electricity Regulatory Commission (UPERC) regulations, as amended from time to time. Distribution/Transmission losses and cross subsidy surcharge will be applicable as per UPERC regulations, as amended from time to time.
- b) Cross subsidy surcharge and wheeling charges/Transmission charges will be exempted 100 % for Intrastate Transmission system on purchase of solar power.

### **9.3 Solar power projects set up on floating /reservoir/canal top or any water body:**

Setting up of large floating solar power projects on canals/reservoirs or any water body will be promoted in the state. The projects will be set up for sale of power to DISCOMs or for sale of power to third party. For sale of Power to DISCOM allocation of Solar Projects will be through competitive bidding as per Ministry of New and Renewable Energy (MNRE), Government of India guidelines.

### **9.4 Solar PV installations along Railway tracks, Expressways and Roads.**

Uttar Pradesh has six expressways having a total length approximately of 2000 KM. Potential **targeted** capacity of setting up **solar** installations along the expressways is **500 megawatts**. Solar Installations will be promoted along the sides of expressways constructed in the State of Uttar Pradesh. Apart from this

establishment of Solar PV installations will be promoted along the Railway tracks in cooperation with Ministry of Railways.

### **9.5 Evacuation Voltage**

The evacuation voltage of the power generated from Utility Scale Power Plants shall be as per Uttar Pradesh Electricity Grid Code 2007 as amended from time to time.

## **10 Development of Solar Parks**

- a) Solar Park is a concentrated area in which management of infrastructure and electricity arrangement is done for setting up more than one solar power project. Solar Power Park developer makes arrangement for providing power evacuation system, water supply system, for internal roads and infrastructure facilities.
- b) State Government will promote the development of integrated solar parks by utilizing waste lands in the State for generation of power. To encourage private participation in development of Solar Parks, project developers will be provided “plug and play” options in Solar Parks being set up.
- c) In Bundelkhand region of the State to provide facilitation for evacuation of power from solar projects of 4000 MW capacity, Green energy Corridor is being set up. Capacity enhancement of the Green Energy Corridor will be done according to the private investment received in the State.

### **10.1 Development of Solar Parks by Private Sector:**

Development of Solar Parks by private companies shall be promoted in the State. The private Solar Power Park Developer will develop power evacuation system, internal roads, make arrangements for lighting system, water supply system and other infrastructure facilities. The State Government will provide the following Incentives for setting up of Solar Parks in private sector:

- i) Connectivity to the nearest Grid substation, subject to technical feasibility, provided that SPPD will bear the cost of external transmission network and cost of transmission system strengthening, if any.

- ii) From 1 megawatt minimum installed capacity, sale of 100 % power to Third party under open access allowed.
- iii) The State Government will provide revenue land for setting up solar park on lease for 30 years at Rs 15000/- per acre per year in order to promote investment in this sector. This land will be non-transferable and if within three years of allocation land is not used for solar Power i.e. work is not initiated then land will be taken back mandatorily.
- iv) Facilitation to obtain the status of Solar power Park developer under Ultra Mega Solar Park scheme of MNRE will be provided.

## **10.2 Development of Public Sector Solar Parks through Joint Venture Companies (JVCs)**

The State Government will promote setting up of Public Sector solar parks. State Government will promote Ultra Mega Renewable Energy Solar Park set up by the state government on its own or by a joint venture formed with any public sector undertaking under the central/state government. In State three Joint ventures named Lucknow Solar Power Development Corporation Ltd (LSPDCL), Bundelkhand Saur Urja Pvt Ltd (BSUL) and TUSCO have been formed for development of Solar Parks. These Joint venture Companies have been formed between UPNEDA and Solar Energy Corporation of India, NHPC and THDC India Ltd respectively.

The State Government will provide the following Incentives for setting up of Solar Parks in public sector:

- i) Revenue land will be provided for setting up solar park on lease or Right to Use basis for 30 years at Rs 1/- per acre per year. This land will be non-transferable and if within three years of allocation land is not used for solar Power i.e. work is not initiated then land will be taken back mandatorily.

- ii) Connectivity to the nearest Grid substation, subject to technical feasibility, provided that SPPD will bear the cost of external transmission network and cost of transmission system strengthening, if any.
- iii) The cost of external transmission network and cost of strengthening of transmission system will be borne by the SPPD in case of sale of power to third party or captive use in the solar park.
- iv) Location of the Solar Park shall be finalized in consultation with State Transmission utility to optimize the cost of transmission. Allocation of the Solar Power Projects inside the Solar Park will be done through competitive bidding as per guidelines of Ministry of New and Renewable Energy (MNRE), Government of India.

## **11 Solar Power Projects with Storage Systems**

- 11.1 Solar power is intermittent in nature as it is available only in daytime. Therefore, to reduce the variability of output of solar power injected into the grid, the State will promote Solar Power Projects with storage systems in form of battery storage, pumped hydro storage or any other grid interactive storage system.
- 11.2 Capital State Subsidy of Rs 2.50 Crore per megawatt will be provided to Utility scale solar power projects set up with 4 hours battery storage system of 05 megawatt capacity or above and standalone battery storage system (energized by solar energy only) for sale of power to Distribution licensee/ UPPCL.
- 11.3 As per the provisions in the Uttar Pradesh Industrial Investment and Employment Promotion Policy-2022 of the State Government, Pumped Storage Plants (PsP's) will be promoted.

## **12 Allotment and Procurement of Land**

Availability of Land is a major constraint in capacity addition of solar projects in Uttar Pradesh. Nodal Agency will create a land bank in State specifically in Bundelkhand region with the objective to remove the procedural delays in availability of land. For setting up of Solar Power Projects maximum land area 5 acres per megawatt will be provided to the Project Developer .

### **12.1.2 Solar Power Projects on Government Land**

Gram Sabha / Panchayat or Government Revenue land will be allotted to Joint Venture Companies formed with public sector undertaking (PSU) of Central Government/State Government for setting up solar parks/solar power projects as per the provisions of Uttar Pradesh Revenue Code -2006.

- a) Land will be provided for setting up solar park on lease or Right to Use basis for 30 years at Rs 1/- per acre per year. This land will be non-transferable and if within three years of allocation land is not used for solar Power i.e. work is not initiated then land will be taken back mandatorily.
- b) Private sector Solar Power Park developer will be provided Gram sabha/ Revenue land on lease for 30 years at Rs 15000/- per acre per year. This land will be non-transferable. The ownership of gram sabha/revenue land being made available for development of solar park shall vest with the Department of Revenue, Govt of Uttar Pradesh. The Solar Power Park developer shall be allowed to sub-lease or provide land on Right to use basis land allotted on lease at the same rate to Solar Project Developer for setting up of Solar Power Projects inside solar park. Solar Power Projects on Private Land.

## **12.1 Solar Power Projects on Private Land:**

- a) The State will promote setting up of Solar Power Project/Solar Farm on private land. Project developer shall be permitted to set-up Solar Power Project/Solar Farm on private agriculture land. Permission from State Government, for change of land use from agriculture to non-agriculture of land purchased by the solar project developer for setting up solar park will be deemed. This permission will be available on registration/recommendation in the State Nodal Agency.
- b) Solar Power Producers will be exempted from obtaining permission to purchase land in excess of maximum limit in accordance with the provisions of Uttar Pradesh Revenue Code 2006 for setting up of Solar Power Plant. Permission will be valid for purchase of land more than the prescribed limit after approval of the project by the State Nodal Agency.
- c) Private land will be allowed to be given on lease for development of solar Power Projects for a period of thirty years. Ownership of this land will be non-transferable and will remain with the shareholder. The District Collector will facilitate in leasing of land from the land owners by the Project developer.

## **12.2 Stamp Duty**

100 % exemption on chargeable Stamp duty on the Land purchased or leased for setting up solar Energy units land in entire State of Uttar Pradesh.



## **13 Incentives & Facilities available to Solar Power Projects**

### **13.1 Facilitation for Government & Private land on lease basis for thirty years**

The State government will provide government land on lease for a period of thirty years for setting up of solar power projects.

- a) Land will be made available to Public sector Solar Power Park developer on lease or right-to-use basis at lease rate of Rs. 1 per acre per year. This land will be non-transferrable.
- b) Government land will be made available to Private sector Solar Power Park developer on lease at rate of Rs. 15000 per acre per year for a period of thirty years.
- c) State Government will facilitate leasing of Private land through the District collector. State Government will provide exemption from declaration in respect to non-Agriculture conversion of land and from obtaining permission on purchase of land more than the prescribed limit.

### **13.2 Stamp Duty :**

100 % exemption from Stamp duty on the Land used for setting up Solar Power Projects/Solar Park in entire State of Uttar Pradesh.

### **13.3 Capital Subsidy**

Capital State Subsidy of Rs 2.50 Crore per megawatt will be provided to Utility scale solar power projects set up with 4 hours battery storage system of 05 megawatt capacity or above and standalone battery storage system (energized by solar energy only ) for sale of power to Distribution licensee/ UPPCL.

### 13.4 **Infrastructure subsidy**

For grid connectivity of Standalone Solar Power projects of capacity 5 MW and above proposed to be set up in Bundelkhand and Purvanchal region, State Government will bear the cost for construction of maximum transmission line length as follows:

- For 05 to 10 Megawatt capacity -10 Kilometer
- For >10 megawatt to 50 megawatt capacity -15 Kilometer
- For >50 megawatt capacity - 20 Kilometer.

### 13.5 **Energy Banking:**

Banking of energy in every financial year shall be permitted up to 100% as per provisions of UPERC Captive and Renewable Energy (CRE) Regulations- 2019 and as amended from time-to-time. Facility of Banking will be available to projects for entire useful life of Project or 25 years whichever is less.

### 13.6 **Electricity Duty**

In respect to all solar projects set up within the State, electricity duty shall be exempted for ten years on sale of power to Distribution licensee, third party, and for captive consumption.

### 13.7 **Incentives available from Government of India**

Various incentives allowed by Ministry of New and Renewable Energy (MNRE) for solar projects shall be allowed to the solar project developers.

13.8 Solar Power Projects shall be exempted from obtaining Environmental clearance.

13.9 Grid connected Solar PV Projects will be exempted from obtaining NOC/ Consent for establishment and operation under Pollution Control laws from U.P Pollution Control Board

13.10 Summary of Incentives available for standalone power projects with capacity above 5 MW and for Solar Power Park developers .

13.10.1 Facilities available to stand alone solar power projects with capacity above 05MW:

<b>S No.</b>	<b>Facility</b>	<b>Private Solar Project Developer</b>
1	Connectivity to the nearest grid substation (Subject to technical feasibility)	Available
2	Sale of Power to third party from Projects set up under open access of capacity above 1 Megawatt .	100%
3	Power Purchase by UPPCL	As per RPO obligation
4	For projects set up in Purvanchal and Bundelkhand region subsidy on expenditure for Transmission line construction 05MW to 10MW- 10 KM >10MW to 50MW- 15KM >50MW – 20KM	Subject to execution of Power Purchase Agreement with UPPCL for purchase of Power
5	Wheeling and transmission charges (Intra State)	100% exemption (on sale of power to UPPCL), 50% exemption ( captive use and third party sale)
6	Wheeling, transmission charges (Inter State sale ) and cross subsidy surcharge .	100% exemption on Intrastate transmission system.
7	Stamp Duty on land purchase/lease of land .	100% Exemption
8	Electricity Duty	100% Exemption for 10 years

9	For setting up Solar Power Projects declaration of land under sec.-80 of Revenue code-2006 from Agriculture to Non agriculture purposes.	Deemed
10	Permission to purchase land more than prescribed maximum limit in Revenue Code -2006.	Deemed
11	Consent to establish and operate projects from Pollution Control Board	Deemed
12.	Capital subsidy on battery storage systems on projects set up with storage systems	Capital State Subsidy of Rs 2.50 Crore per megawatt will be provided to Utility scale solar power projects set up with 4 hours battery storage system of 05 megawatt capacity or above and standalone battery storage system (energized by solar energy only ) for sale of power to Distribution licensee/ UPPCL

### 13.10.2 Facilities available to Solar Power Park Developers:

S No.	Facility	Public Sector Developer	Private Sector Developer
1	Connectivity to the nearest grid substation (Subject to technical feasibility)	allowed	allowed
2	Third party sale of power under open access from projects above 1 megawatt capacity	Allowed 100%	Allowed 100%
3	Power Purchase by UPPCL	As per RPO obligation and commercial interest of Corporation	As per RPO obligation and commercial interest of Corporation

4	Stamp Duty on land purchase/lease of land	100% Exemption	100% Exemption
5	Electricity Duty	100% exemption for 10 years	100% exemption for 10 years
6	For setting up Solar Power Projects declaration of land under sec.-80 of Revenue code-2006 from Agriculture to Non agriculture purposes.	Deemed	Deemed
7	As per provision in Revenue code-2006 Permission to purchase land more than prescribed maximum limit of 12.5 acres.	Deemed	Deemed
8	Consent to establish and operate projects from pollution control board	Deemed	Deemed

**13.10.3 Facilities available to stand alone solar power projects with capacity less than 05MW:**

<b>S No.</b>	<b>Facility</b>	<b>Private Solar Project Developer (Resco)</b>
1	Connectivity to the nearest grid substation.	Available
2	Under MNRE PM KUSUM Yojna component (C-1) on solarization of installed on-grid pumps in addition to financial assistance provided by Central Government, 70 % State subsidy will be provided to the farmers of Scheduled Tribe, Vantangia and Musahar category. State government will provide additional 60% subsidy to other	

	category farmers.	
3	Under MNRE PM KUSUM Yojna component (C-21) State government will provide on on Grid connected solar power projects set up for Solarization of Segregated Agriculture feeders maximum Viability Gap Funding (VGF) of Rs. 50 lakh per megawatt in addition to subsidy being provided by Central government.	UPPCL will Purchase Power on this condition that Power Purchase Agreement has been executed with UPPCL .
4	Wheeling and transmission charges (Intra State)	100% exemption (on sale of power to UPPCL).
5	Stamp Duty on land purchase/lease of land.	100% Exemption
6	Electricity Duty .	100% Exemption for 10 years
9	For setting up Solar Power Projects declaration of land under sec.-80 of Revenue code-2006 from Agriculture to Non agriculture purposes.	Deemed
10	Permission to purchase land more than prescribed maximum limit in Revenue Code -2006.	Deemed
11	Consent to establish and operate projects from Pollution Control Board	Deemed
12.	Government land at Rs 15000/per acre per annum for 30 years.	Available on lease .

13.11 Subsidy will be admissible only in those plants/projects which have been purchased /constructed after the date of promulgation of this policy.

13.12 It will be ensured that the beneficiaries being provided subsidy are not getting subsidy for the same system under any other scheme of the State Government.

## 14. Approval Mechanism

### 14.1 State Level Empowered Committee (SLEC)

- I- To resolve key bottlenecks in implementation of this policy and resolve any other Inter departmental issues that may arise from time to time, an High level committee will be constituted under the chairmanship of the Chief Secretary of the State.
- II- This committee will provide approval for projects of 5 MW and more than 5 MW capacity allocated under the Solar Energy Policy
- III- In case of any issue in implementation of the policy, the committee will recommend Hon'ble departmental Minister and Hon'ble Chief Minister for amendment in the policy
- IV- The committee will consist of following members :-

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



V- The State Level Empowered Committee will hold quarterly meetings as far as possible to monitor the policy, but if approval of projects is required, the meeting can also be held earlier

#### **14.2 Department level Empowered committee(DLEC)**

I-This committee will provide approval for projects of 0.5 to 05 MW capacity allocated under the Solar Energy Policy

II- The committee will consist of following members:

- Additional Chief Secretary/ Principal Secretary - Chairman  
Department of Additional Sources of Energy
- Secretary/Special secretary level officer nominated -Member  
by Additional Chief Secretary/ Principal Secretary Energy
- Secretary/Special secretary level officer nominated -Member  
by Additional Chief Secretary/ Principal Secretary Finance
- Secretary/Special secretary level officer nominated -Member  
by Additional Chief Secretary/ Principal Secretary Housing
- Secretary/Special secretary level officer nominated -Member  
by Additional Chief Secretary/ Principal Secretary Revenue
- Managing Director, UPPTCL -Member
- Managing Director, UPPCL -Member
- Managing Director, Concerned DISCOM -Member
- Director, UPNEDA – -Member Secretary
- Any subject expert for administrative work may be co-opted as member  
after approval from Chairman

#### **14.3 District Level committee :**

I-To resolve problems in implementation of this Policy at district level and for promotion and publicity of this policy a district level committee under the chairmanship of District Magistrate will be constituted .

II- The committee will consist of following members:

- 1- District Magistrate - Chairman
- 2- Chief development Officer -Member

- |  |                    |
|--|--------------------|
| 3- Executive Engineer (Rural) Discom           | -Member            |
| 4- -Nagar Nigam /Development authority officer | -Member            |
| 5- Project officer UPNEDA                      | - Member Secretary |

III- During the operation period of the Policy funds for publicity will be available as follows:

- 1-Nagar Nigam Headquarter - Rs 2.0 Lakh
- 2-Nagar Palika Headquarter - Rs 1.0 Lakh

## **15 Uttar Pradesh Solar Energy Development fund (UPSEDF)**

A Corpus fund with the cooperation of state government, central government and voluntary organizations working in renewable energy sector will be created in UPNEDA. Assistance in the form of cash and kind (knowledge sharing) will be acceptable in this fund. This fund will be used for development of solar energy in the state.

The nodal agency will be able to obtain grants-in-aid from international multilateral and bilateral financing organizations in this corpus fund the solar energy sector and from this fund state nodal agency will receive support in fulfilling its commitments related to the renewable energy sector under the State Action Plan for Climate Change.

This corpus will be spent on activities for enhancing the institutional framework for solar energy. Expenditure from this fund will be done after approval by State Level Empowered Committee. The SLEC will be the final approving authority for any proposed expenditure under UPSEDF.

## **16 Time frame for completion of solar Projects.**

For completion of solar projects timeline will be as mentioned in the bidding documents and Guidelines issued by MNRE. In case of any delay in project execution, penalty would be imposed as per the contract.

## **17 Manufacturing of Solar Equipments**

- a) Manufacturing facilities for Solar equipment will be promoted for the development of solar energy ecosystem in the state.
- b) Depending on type of investment, incentives available under State Micro, Small and Medium Enterprises (MSME) Policy and Uttar Pradesh Industrial Investment and Employment Promotion Policy as applicable on date will be made available to eligible manufacturers.

## **18 Employment Generation & Skill Development**

- a) In next five years, 30000 youth will be trained as Surya Mitra at UPNEDA training centres, U.P. Skill development Mission & National Institute of Solar Energy certified Training centres .
- b) Surya Mitra will provide their services for Installation, operation, repair and maintenance of Solar Systems (Solar Street Light, Solar Power Plant etc.).
- c) Training will be provided to Surya Mitra as per the training Curriculum of U.P. Skill development Mission & National Institute of Solar Energy (NISE).
- d) These Surya Mitra's will be linked to Sewa Portal to ensure availability for citizen service.
- e) Skill Development trainings under Surya Mitra programme will be provided to inmates in jails under the jurisdiction of state government.

## **19. Power to amend & interpret the policy**

Government of UP will have power to amend/ review/relax/interpret any of the provisions under this policy as and when required.

