

## Salient Features – Solar policies

Today India is fast becoming one of the world's most attractive markets for Renewable Energy investments. India's rise has been due to the effective policy and regulatory support for development of Renewable Energy Technologies (RETs).

Various policy measures such as Jawaharlal Nehru National Solar Mission (JNNSM) Feed-in-Tariff, Accelerated Depreciation (AD), Generation Based Incentives (GBI), Renewable Purchase Obligations (RPO) and Renewable Energy Certificates (RECs) have helped in the rapid growth of Renewable Energy deployment in the country.

Along with above demand and supply side measures to promote Renewable Energy growth in India, various states have come up with their state Solar policies to provide an enabling framework for growth of Renewable Energy in India.

Salient features of various State Solar Policies are provided in the following sections.

### **GUJARAT SOLAR POLICY 2009**

A state specific policy dedicated to solar was first envisioned by Gujarat in 2009. The outlines were given under the policy titled "Solar Power Policy -2009". The policy was the first solar specific policy introduced in the country predating the National Solar Mission.

The Gujarat Solar Policy is operative till 31<sup>st</sup> March 2014. Any Solar Power Generator (SPG) commissioned during the operative period shall become eligible for incentives declared under this policy for a period of 25 years.

#### **Salient Features:**

##### ✓ **Capacity:**

- Only new plants and machinery will be eligible under this Policy. No fossil fuel shall be allowed for Solar Thermal Project.
- The minimum capacity of for Solar PV and Solar Thermal projects will be 5 MW each. A total of 500MW SPG shall be allowed for installation during the operative period of this policy.

##### ✓ **Cross-subsidy charge:**

Cross subsidy surcharges shall not be applicable for Open Access obtained for third party sale within the state.

##### ✓ **Wheeling Charges:**

As determined by GERC from time to time.

##### ✓ **Electricity Duty:**

- Exempted from payment of electricity duty for sale through all modes(self consumption/sale to third party/sale to licensee)
- Exemption from demand cut to the extent of 50% of installed capacity

✓ **PPA :**

PPA duration will be 25 years

✓ **Bank Guarantee:**

Developer to furnish a BG @Rs 50Lakhs/MW at the time of PPA signing with Distribution Licensee.BG to be refunded if the developer commissions the project in time as per PPA.

✓ **Metering of Electricity:**

Electricity generated would be metered jointly on a monthly basis by GEDA/GETCO. Metering to done at sending sub-station of 66 kV or above, located at the site.

✓ **Reactive power charges:**

As per GERC order.

✓ **Transmission infrastructure:**

Transmission line from SPG switch yard to GETCO sub-station shall be laid by GETCO.SPG to inject power at 66kV.

✓ **Sharing of CDM benefit:**

SPG will pass 50% of CDM benefit to DISCOM with whom PPA is signed.

✓ **Forecasting & Scheduling:**

SPG based generation shall not be covered under scheduling procedure for Intra-state ABT.

✓ **Nodal Agencies for facilitation and implementation of Solar Power Policy- 2009:**

- Gujarat Energy Development Agency (GEDA)
- Gujarat Power Corporation Limited (GPCL)

The detailed policy document can be downloaded from the following link:

[Gujarat Solar Policy 2009](#)

## RAJASTHAN SOLAR POLICY 2011

The policy aims at developing Rajasthan as a global hub of solar power of 10,000-12,000 MW capacity in next 10-12 years to meet energy requirements of Rajasthan and India. To achieve grid parity in next 7-8 years, the State will encourage the Solar Power Developers to establish manufacturing plant of their technology in Rajasthan.

This Policy document is aimed at giving a direction to the above stated ambition of the Rajasthan state.

### **Salient Features:**

The Policy will come into operation with effect from 19.4.2011 and will remain in force until superseded or modified by another Policy.

✓ To achieve the objectives of this Policy, the targets under the policy are mentioned below:

1. The State Government has sanctioned two Solar Power Projects of 5 MW capacity under the GOI guidelines for **Generation Based Incentive scheme** for Grid Interactive Solar Power Generation Projects issued by MNRE. The power evacuation transmission line from generating plant sub-station to the receiving RVPN/Discoms of Rajasthan sub-station will be laid by STU/Home Discom as per the prevailing orders of RERC.
2. The Rajasthan State has sanctioned 66 MW solar power projects in compliance of the **RERC's orders**. These sanctioned projects were migrated to National Solar Mission by the State Government. The power produced from these solar power plants shall be procured by NVVN as per mechanism provided under National Solar Mission Phase-1. The Discoms of Rajasthan shall purchase this solar power from NVVN along with the equivalent amount of MW capacity from the unallocated quota of NTPC stations allotted to NVVN by Ministry of Power, GoI. The power evacuation transmission line from generating plant sub-station to the receiving RVPN/Discoms of Rajasthan sub-station will be laid by STU/Home Discom as per the prevailing orders of RERC.
3. The Rajasthan State will *develop 50 MW SPV and 50 MW Solar Thermal Power Plants* through selection of developer(s) by the tariff based **competitive bidding process on concept of bundling of Solar Power with equivalent amount of MW capacity of conventional power**. The successful bidder will set up Solar Power Plant in Rajasthan and supply equivalent amount of MW capacity of conventional power from Conventional Power Plants located anywhere in India. The power evacuation transmission line from generating plant sub-station to the receiving RVPN/Discoms of Rajasthan sub-station will be laid by STU/Home Discom as per the prevailing orders of RERC.
4. The Rajasthan State will promote setting up of Solar Power Plants connected at 33 kV & above level *under the guidelines of National Solar Mission (NSM)*. The minimum/maximum capacity allocation to each Solar Power Producer will be as per MNRE guidelines. The power evacuation transmission line from the Generating plant sub-station to the RVPN/Discom receiving Sub-station will be laid as per provisions of the orders of appropriate Commission.
5. The state government will support setting up of *100 MW solar photovoltaic power plants and 100 MW solar thermal power plants under phase I of the Rajasthan Solar Energy Policy 2011* for direct sale of power to discoms in the state. Under phase II (2012-2017), the state government

plans to add another 400MW of solar power through tariff based competitive bidding process. The power evacuation transmission line from generating plant sub-station to the receiving RVPN/Discoms of Rajasthan sub-station will be laid by STU/Home Discom as per the prevailing orders of RERC.

The minimum/maximum capacity allocation to each Solar Power Producer under phase 1 will be as under:

Technology	Minimum capacity	Maximum capacity
SPV	5MW	10MW
CSP	5MW	10MW

The minimum/maximum capacity allocation to each Solar Power Producer for power projects in Phase-2 will be decided by the State Government at the time of capacity allocation for Phase-2.

6. The Rajasthan State will promote Solar Power Producers to set up Solar Power Plants of unlimited *capacity for captive use* or sale of power to 3rd party/States other than Rajasthan. There will be no upper ceiling for power projects. The power evacuation transmission line from the Generating plant sub-station to the RVPN/Discom receiving Sub-station will be laid as per provisions of the orders of appropriate Commission.
7. The Rajasthan State will promote deployment of Roof-top and Other Small Solar Power Plants connected to LT/11kV Grid as per guidelines of MNRE under Rooftop PV & Small Solar Generation Programme (**RPSSGP**) of **NSM**. The minimum/maximum capacity for power project sanctioned under this category will be as per the guidelines issued by MNRE. The power evacuation transmission line from generating plant sub-station to the receiving RVPN/Discoms of Rajasthan sub-station will be laid by STU/Home Discom as per the prevailing orders of RERC.
8. The State will promote setting up of **small solar power plants** connected at 11 kV grid of 1 MW capacity each for direct sale to State Discoms of Rajasthan. The total capacity under this category will be 50 MW. The selection of the projects will be through tariff based **competitive bidding** process. There will be no upper ceiling for power projects.
9. The Rajasthan State will promote Solar Power Producers to set up Solar Power Plants of unlimited *capacity for sale through RE (Solar) Certificate mechanism*. The power evacuation transmission line from the Generating plant sub-station to the RVPN/Discom receiving Sub-station will be laid as per provisions of the orders of appropriate Commission
10. The Rajasthan State will *promote* **Solar Power Producers to set up Solar Power Plants along with Solar PV manufacturing plants** in Rajasthan. The target under this category will be 200 MW up to 2013. The capacity allocation for manufacturing plant will be as follows:-

Per annum production capacity of Manufacturing Plant	Capacity allocation for SPV based Solar Power Plant
More than 25 MW but less than 50 MW	10 MW
50 MW and above	20 MW

The selection of developers shall be through tariff based competitive bidding. The Solar Power Producer will be required to source SPV modules from their own manufacturing unit established in Rajasthan. The power evacuation transmission line from generating plant sub-station to the receiving RVPN/Discoms of Rajasthan sub-station will be laid by STU/Home Discom as per the prevailing orders of RERC.

11. The Rajasthan State will also promote **decentralized and off-grid solar applications**, including hybrid system such as solar water heaters, solar cooling systems, air drying, steam cooking, power generation, sterling engine. The off-grid solar applications shall be promoted for replacement of diesel based generators sets. The Rajasthan State *will also consider incentives* for promotion of decentralized and off grid solar applications.
12. Rajasthan also intends to set up **Pilot Demonstration Projects** under National Solar Mission's R&D initiatives in Phase – 1 of Solar Mission. This will include :
  - a. 50-100 MW Solar thermal plant with 4-6 hours storage (which can meet both morning and evening peak load and increased plant load factor up to 40%)
  - b. A 100 MW Parabolic trough technologies based solar thermal plant
  - c. A 100-150 MW Solar hybrid plant with coal, gas or bio-mass to address variability and space-constraints.
  - d. 20-50 MW Solar plant with or without storage, based on central receiver technology with molten salt/steam as working fluid and other emerging technologies.
  - e. Grid connected rooftops PV systems on selected Government buildings and installations, with net metering
  - f. Solar based space cooling and refrigeration systems

The capacity allocation for pilot demonstration project will be finalized in consultation with MNRE.

The maximum capacity to be commissioned under this Clause will be decided by the Rajasthan Government after studying the subsidy pattern for these demonstration projects under NSM

13. The Rajasthan State will develop **Solar Parks** (with RREC as nodal Agency) of more than 1000 MW capacity in identified areas of Jodhpur, Jaisalmer, Bikaner and Barmer districts in various stages. RREC will allocate budget for development of infrastructure in Solar Parks to SPV. The SPV will develop the initial infrastructure from the funds allocated by RREC, which will be subsequently recouped from the Solar Power Producers whose project are located in Solar Parks by levying development charges.
14. The Rajasthan State will promote **Solar Water heating system** by adopting the key strategy of making necessary policy changes for mandatory use of solar water heating system (SWHS) on Industrial, commercial, residential and other establishments.

The policy also, specifies minimum/maximum capacity to each Solar Power Producer for power projects sanctioned under various categories mentioned above.

✓ **Time schedule for completion:**

Type of Projects	Completion Time schedule
<b>SPV:</b>	
Up to 5 MW capacity	Within 15 months from the date of SLEC approval
More than 5 MW and up to 10 MW capacity	Within 24 months from the date of SLEC approval
More than 10 MW and up to 25 MW capacity	Within 30 months from the date of SLEC approval
More than 25 MW and up to 50 MW capacity	Within 36 months from the date of SLEC approval
More than 50 MW	Within 40 months from the date of SLEC approval
<b>CSP:</b>	
Up to 25 MW capacity	Within 30 months from the date of SLEC approval
More than 25 MW and up to 100 MW capacity	Within 40 months from the date of SLEC approval
More than 100 MW and up to 200 MW capacity	Within 46 months from the date of SLEC approval
More than 200 MW	Within 50 months from the date of SLEC approval

Provided that extension in time schedule may be granted by the SLEC on case to case basis after depositing penalty amount as under:

For delay up to 3 months	Rs.1,25,000 per MW
For delay more than 3 months but up to 6 months	Rs.2,50,000 per MW
For delay more than 6 months but up to 9 months	Rs.3,75,000 per MW
For delay more than 9 months but up to 15 months	Rs.5,00,000 per MW

✓ **Developmental charges:**

For Solar power projects established for sale of solar power to parties other than Discoms of Rajasthan, the Solar Power Producer shall deposit non-refundable development charge of Rs. 10 Lacs per MW to Rajasthan Renewable Energy Corporation Ltd. within one month from the date of issue of in-principle clearance for availing benefits, facilities and concessions under the provisions of this policy. For solar power projects established for sale of solar power to Discoms of Rajasthan State, no development charges will be leviable from the Solar Power Producers.

✓ **Creation of Rajasthan Renewable Energy Infrastructure Development Fund:**

The resources mobilized by collection of development charges will be credited to Rajasthan Renewable Energy Infrastructure Development Fund. This fund will be utilized for creation of infrastructure such as transmission network, roads etc. for accelerated development of renewable energy.

✓ **Land:**

**Government Land:** After registration of the project, RREC will recommend to the concerned District Collector for reservation of the land identified by the Solar Power Producer. The District Collector will set apart the land for the project for a period of three years after examining its suitability for allotment under Rajasthan Land Revenue (Allotment of Land for setting up of Power plant based on Renewable Energy Sources) Rules, 2007, as amended from time to time. The Revenue Department may extend the period of reservation on recommendation of RREC. After expiry of the period of reservation, the land will be released for use by other developers and for other purposes. The process of reservation of land will be completed by the concerned District Collector within the 30 days from the receipt of recommendation of RREC.

After registration of land, the allotment of land to the Solar Power Projects will be done as per the provisions of Rajasthan Land Rules, 2007, as amended from time to time. The Government land required for Solar Power Plant shall be allotted to Solar Power Producer at concessional rate of 10% of the DLC rate (agriculture land).

**Private Land:** Power Producers shall be allowed to purchase private land from the Khatedar for setting up of Solar Power Plants in excess of ceiling limit prescribed in the Ceiling Act, 1973. Conversion of private land to industrial use shall be required for setting up of Solar Power Plant/Solar manufacturing plant before start of work. The conversion charges shall be 10% of charges levied for Industrial purpose under the relevant rules.

**Land for Manufacturing unit:** Land in RIICO industrial area, in solar parks and will be as per respective regulations.

✓ **Receiving sub-station:**

- For 33kV and above grid connected solar plants , RVPN shall finalize the location of receiving Sub-station in consultation with RREC on which the electricity generated will be received at minimum 33 kV level
- For 11kV grid connected solar plants, Discoms of Rajasthan shall finalize the location of receiving station for small solar power plant in consultation with RREC.
- For LT connected solar plants, Discoms of Rajasthan shall allow interconnections of solar power plants connected to LT voltage level as per standard /norms fixed by Central Electricity Authority/ guidelines of MNRE/ relevant RERC order.

✓ **Grid Connectivity:**

For creation of proper facility for receiving power, the Solar Power Producer shall pay **Grid Connectivity charges** as finalized by RERC from time to time to Discoms of Rajasthan/RVPN as applicable.

The power evacuation transmission line from generating plant sub-station to the receiving RVPN/Discoms of Rajasthan sub-station will be laid by STU/Home Discom or as per the prevailing orders of RERC.

For grid connectivity/construction of line to be arranged by RVPN/ Discoms of Rajasthan, the Solar Power Producer shall submit time-frame for construction of their plant along with Bank Guarantee equivalent to the cost of bay and transmission/ distribution line with an undertaking to use the system within prescribed period. In case there is any delay in utilization of system, a penalty @ 12% per annum for the period of delay on the amount of Bank Guarantee will be levied by RVPN/ Discoms of Rajasthan. The Bank Guarantee shall be returned to the Solar Power Producer after commissioning of the project on depositing amount of penalty, if any on account of delay in the utilization of the system.

✓ **Water Availability:**

Water Resource Department will allocate required quantity of water from IGNP canal/the nearest available source for development of Solar Thermal Power Plants subject to the availability of water for power generation.

✓ **Electricity Duty:**

The energy consumed by the Power producers for own use will be exempted from payment of the electricity duty.

✓ **Open Access charges and losses:**

As approved by RERC from time to time.

✓ **Metering of Electricity:**

Metering arrangement shall be made as per Central Electricity Authority (Installation & Operation of Meters) Regulations, 2006, the grid code, the metering code and other relevant regulations issued by RERC/CERC in this regard

✓ **Reactive power charges:**

As per RERC order.

✓ **Sharing of CDM benefit:**

Solar Power Producer will pass CDM benefit to DISCOM with whom PPA is signed as per appropriate commission's order.

✓ **Forecasting and scheduling:**

The Solar energy generated for sale will not be covered under scheduling procedure for Intra-State ABT

RREC to act as Nodal Agency for Single Window Clearance of Projects

The detailed policy document and amendments (First & Second Amendment) can be downloaded from the following link:

[Rajasthan Solar Policy 2011](#)

[First Amendment to Rajasthan Solar Policy 2011](#)

[Second Amendment to Rajasthan Solar Policy 2011](#)



## KARNATAKA SOLAR POLICY 2011-16

Under the Karnataka Renewable Energy Policy, it is envisaged that the State will have a target for achieving 126 MW of solar power up to 2013-14. The Govt. of Karnataka had released the Solar Policy for FY11-FY16 on 1<sup>st</sup> July 2011 envisaging to set up a capacity of 200 MW of solar power in the state for the RPO fulfillment of the ESCOMs. The policy came into force from 1<sup>st</sup> July 2011 and shall remain in force up to 31<sup>st</sup> March 2016.

### **Salient Features:**

#### ✓ **Proposed Capacity:**

It is proposed to install 200 MW up to 2015-16, for the purpose of procurement by the ESCOMS. This will be in addition to the allotment received under JNNSM. The annual capacity approved will be as follows:

<b>Years</b>	<b>Capacity (MW)</b>
2011-12	40
2012-13	40
2013-14	40
2014-15	40
2015-16	40

- This does not include CPP and those put up for sale of power to third party.
- The minimum capacity shall be 3 MW and max. capacity will be 10 MW for Solar PV projects and min. capacity shall be 5 MW for Solar Thermal projects
- Power evacuation shall be through 11 KV and above voltage will only be permissible.
- Project allocation will be done through competitive bidding process with a maximum tariff being in accordance with the KERC order.

#### ✓ **Additional Capacity:**

The state reserves a capacity of 50 MW from the central or state owned undertaking for setting up solar projects in the state for providing solar power bundled with thermal power from outside the state at the rates to be determined by the govt. subject to the approval of KERC. This is in addition to the 200 MW of capacity planned as mentioned above.

#### ✓ **Wheeling & OA charges:**

In addition to envisaged 200MW capacity, captive power plants and plants for sale to third party will also be set up. In case of captive power plants and projects for sale of power to third party other than ESCOMs, wheeling and open access charges have to be paid as determined by KERC/CERC.

✓ **REC Scheme:**

Under the REC mechanism the project developers can sell their power at the pooled cost of power purchase only to the ESCOMS. A capacity of 100 MW can be installed under this scheme.

✓ **CDM Proceeds:**

Sharing of CDM proceeds will be as per bidding documents.

✓ **Metering:**

Metering arrangement shall be made as per Central Electricity Authority (Installation & Operation of Meters) Regulations, 2006, the grid code, the metering code and other relevant regulations issued by KERC/CERC in this regard

✓ The state will continue to implement JNNSM and all other schemes of the MNRE.

✓ KREDL will be the nodal agency for facilitating and implementing this policy.

The detailed policy document can be downloaded from the following link:

[Karnataka Solar Policy 2011-16](#)

## MADHYA PRADESH SOLAR POLICY 2012

Madhya Pradesh has come out with its Solar Policy 2012.

All Solar energy based power project Developers (Solar PV/Solar thermal) and manufacturing units of equipments, ancillaries related to Solar Power projects shall be eligible for benefits under the Policy. Only new plant and machinery shall be eligible for installation under the Policy

### Salient Features:

- ✓ There will be four categories of Solar Projects covered under the policy
- **Category I:** Projects selected as per the competitive bidding process *for selling power to MP Discoms / MP Power Management Company*. Maximum/minimum capacity will be as per RfS document issued by GoMP from time to time. Only project capacities to be installed in the state of Madhya Pradesh shall be eligible for incentives under this Policy. The total capacity under this category will be as per the Renewable Purchase Obligation (RPO) targets specified by M.P. Electricity Regulatory Commission (MPERC) from time to time or as decided by the GoMP.
- **Category II:** Projects, of unlimited capacity(subject to single project capacity limitation described below), to be set up for captive use or *sale of power to 3rd party within or outside the state or for sale of power to other states* through open access –. Only project capacities to be installed in the state of Madhya Pradesh shall be eligible for incentives under this Policy.
  - **Projects on Private Land:** There is no maximum capacity cap on single project installed on private land. For projects proposed *to be set up on private land*, any developer willing to establish solar power project shall be eligible for incentive subject to registration with the GoMP. Performance Guarantee to be provided will be as per the guidelines specified in the qualification/selection document issued by GoMP
  - **Projects on government Land:** For projects on government land, maximum/minimum project capacity is limited as per following table:

Technology	Min Capacity(MW)	Max capacity(MW)
SPV	0.025	100
Solar Thermal	1.00	100

For projects proposed *to be set up on government land*, there shall be a set of qualification criteria fixed by the GoMP. Every such applicant shall be evaluated against each of the qualification criteria as specified in the invitation document. Upon eligibility, the available land shall be offered on the basis of maximum free energy per Mega Watt offered by the qualified bidders. Only such selected projects shall be eligible for incentives under this Policy. Performance Guarantee to be provided will be as per the guidelines specified in the qualification/selection document issued by GoMP.

- **Category III:** Projects, of unlimited capacity, to be set up *under Renewable Energy Certificate (REC) mode*. The minimum and maximum single project capacity for accreditation under REC mechanism will be as per the Guidelines/Orders/Regulations issued by CERC/MPERC from time to time.
  - **Projects on government Land:** For projects proposed *to be set up on government land*, in addition to CERC REC mechanism criteria, there shall be a set of qualification criteria

fixed by the GoMP. Every such applicant shall be evaluated against each of the qualification criteria as specified in the invitation document. Upon eligibility, the available land shall be offered on the basis of maximum free energy per Mega Watt offered by the qualified bidders. Only such selected projects shall be eligible for incentives under this Policy. The Developer shall submit Performance Bank Guarantee at the rate of Rs. 5.0 Lac/MW or part thereof to New & Renewable Energy Department (GoMP). Guarantee shall be valid for a period of twenty four (24) months for Solar PV projects and for a period of forty (40) months for Solar thermal projects respectively

- **Projects on Private Land:** For projects proposed *to be set up on private land*, any enterprise fulfilling the requirements/criterion as specified under CERC REC mechanism may apply to the State Nodal Agency as per the procedures laid down by CERC and/or MPERC. Such developers can apply for registration any time. In case the project is set up on private land then developer is exempted from submitting any performance guarantee
- **Category IV:** Projects *under Jawaharlal Nehru National Solar Mission*. The minimum and maximum project capacity will be as per JNNSM guidelines.

✓ **Timelines:**

**Category I Projects:** Solar projects under this category will be required to strictly adhere to the timelines as specified in the qualification/bid document issued by the GoMP.

**Category II & III Projects:** The project must be commissioned within the timelines mentioned below:

S. No.	Benchmark	Timeline (from zero day )		Percentage refund of performance guarantee (%)
		Solar PV	Solar Thermal	
1	Date of issue of administrative approval	Day 0	Day 0	-
2	Letter of land possession/Land use permission/allotment	3 Months	3 Months	10% (within 15 days of the submission of proof)
3	Power purchase agreement	5 Months	5 Months	20% (within 15 days of the submission of proof)
4	Financial closure	11 Months	11 Months	30% (within 15 days of the submission of proof)
5	Project commissioning	17 Months	24 Months	40% (after 3 months of successful operation from the date of project commissioning)

**Decentralized and off-grid solar projects:** The Govt. of MP will promote decentralized and off-grid solar applications, including hybrid systems as per guidelines issued by MNRE.

✓ **Performance Guarantee:**

- **Category I project:** It will be as per the guidelines specified in the qualification/selection document issued by GoMP.
- **Category II Projects and Category III:** The Developer shall submit Performance Bank Guarantee (for projects being setup on government land at the rate of Rs. 5.0 Lac/MW or part thereof to New & Renewable Energy Department (GoMP). The Bank Guarantee shall be valid for a period of twenty four (24) months for Solar PV projects and for a period of forty (40) months for Solar thermal projects respectively

✓ **Contract Demand Reduction:**

The Industrial Consumers opting to buy power from Solar Power Project under category II and III shall be allowed corresponding pro-rata reduction in Contract Demand on a permanent basis but subject to the decision of MPERC in this regards.

✓ **Metering:**

Metering equipment, as may be stipulated by MPPTCL or by respective MP Discom, shall be installed at the interconnection point which shall be line isolator of outgoing feeder on HV side of the pooling substation. Developers will install metering equipments at their own cost

✓ **Grid evacuation & evacuation facility**

The developer shall be responsible for laying of power evacuation line from generating station to the nearest substation or interconnection point. He shall also be responsible for interconnection arrangement which includes transformer panel, protections, metering etc, at the substation or interconnection point.

✓ **Wheeling and transmission charges:**

The Developer shall be responsible for payment of all wheeling and transmission charges to the MPPTCL/respective Distribution Company in case of sale of power to Third Party Consumers/ Distribution Licensee/ Power Management Co. Ltd utilizing their network the payment shall be subject to the regulations of MPERC.

✓ **Land:**

For setting up Solar Power Plant in Madhya Pradesh, maximum land use permission for government land, if available, to the Solar Power Producer shall be 3.0 Hectares per MW. In case the Developer purchases private land for the project, then they will be eligible for an exemption of 50% on stamp duty.

In case of land owned by Revenue Department or any other State Government Department, the New & Renewable Energy Department shall take possession of the land and subsequently give permission for use of land to the concerned Developer (whose project has been accorded administrative approval).

✓ **Wheeling charges:**

The policy provides a grant of 4% (in terms of energy injected) by the state under wheeling charges to all solar power projects.

✓ **Electricity Duty:**

Policy provides 10-year (from COD) exemption in electricity duty (including captive units),

✓ **Banking:**

Banking (2% banking charges) of 100% of energy in every financial year shall be permitted. The balance energy, if any, at the end of a Financial Year after return of banked energy shall be purchased by the concerned State Distribution Company/ State Power Trading Company in accordance with the rules/ directions of MPERC.

✓ **VAT:**

Equipments purchased for installation of Solar power plants will be exempted as per VAT rules and entry tax.

✓ **CDM Benefits:**

CDM benefits to the solar power project Developers/Investors shall be as per the provisions specified by MPERC.

✓ **Others:**

Regarding other facilities/incentives such as Open Access, Reactive Power and Renewable Purchase Obligation, the provisions specified by MPERC shall be applicable

The detailed policy document can be downloaded from the following link:

[Madhya Pradesh Solar Policy 2012](#)

## Andhra Pradesh Solar Policy 2012 & First Amendment

The policy shall come into operation with effect from the date of issuance (26/9/2012) and shall remain applicable till 2017.

### **Salient Features:**

#### ✓ **Installed capacity:**

It intends to promote utility grid power projects for Captive Use/ Direct Sale to third party/within the state and Utility Grid Power Projects for sale through RE (Solar) Certificate Mechanism. Also, it intends to promote the Off-Grid Solar applications to meet the power needs on Stand-alone basis.

#### ✓ **Wheeling & Transmission charges:**

Producer will bear the wheeling and transmission losses as per actual.

#### ✓ **Banking:**

Banking of 100% of energy shall be permitted for one year from the date of banking. The settlement of banked energy will be done on monthly basis. However, banked units cannot be consumed/redeemed from February to June and also during TOD hours as amended from time to time. Developer will be required to pay 2% of the banked energy towards banking charges.

#### ✓ **OA charges:**

Intra-state Open Access clearance for the whole tenure of the project or 25 years whichever is earlier will be granted within 15 working days of application to both the generator and consumer irrespective of voltage level.

#### ✓ **Additional Incentives:**

To promote investments in AP, the following incentives would be applicable till June 2014. These incentives will be in force for a period of seven years from the date of implementation.

- No **wheeling and transmission charges** will be applicable for sale of electricity within the state from the Solar Power Projects, to the desired location/s for captive use/third party sale through the grid. However, producer has to bear (As per APERC regulation) the wheeling and transmission losses as per actual in case of captive/open access sale outside the state.
- No **Cross Subsidy charges** for third party sale within the state and for captive use.
- Exemption from **electricity duty** for captive consumption and third party sale within the state.
- Refund of VAT ,paid in AP only, by Commercial Dept for all the good used for Solar developers
- Refund of Stamp duty and registration charges paid for land purchase

Projects claiming above benefits can claim REC benefits *provided they are in line with the APERC/CERC regulations.*

✓ **Evacuation infrastructure:**

The evacuation line from interconnection point to the grid substation shall be laid by the APTRANSCO or DISCOM at the cost of the developer.

✓ **Land:**

It is the responsibility of the Project Developer to acquire the land required for the project.

✓ **Reactive Energy charges:**

Reactive charges applicable to the project developer as per APERC regulation.

The detailed policy document and amendment can be downloaded from the following link:

[Andhra Pradesh Solar Policy 2012](#)

[Amendment to Andhra Pradesh Solar Policy](#)



## **TAMIL NADU SOLAR POLICY 2012**

Tamil Nadu solar policy aims to achieve 3GW installed capacity by 2015 and thereby achieve grid parity.

### **Salient Features:**

#### ✓ **RPO Mechanism:**

- 3% solar RPO requirement till December 2013 & 6% solar RPO requirement from 2014
- RPO to be applicable to:
  - Special Economic Zones (SEZs)
  - Industries guaranteed with 24/7 power supply
  - IT Parks, Telecom Towers
  - All Colleges & Residential Schools
  - Buildings with a built up area of 20,000 sq.m. or more
  - This mechanism will require generation of 1000 MW by 2015.

The following categories are exempted from SPO

- Domestic consumers
- Huts
- Cottage & Tiny Industries
- Power looms
- LT Industrial consumers
- Agricultural consumers

The SPO will be administered by TANGEDCO

#### ✓ **Programme Break – up:**

The 3,000 MW of Solar Power will be achieved through Utility Scale Projects, Rooftops and under REC mechanism as follows:

<b>Year</b>	<b>Utility Scale (MW)</b>	<b>Solar Roof Tops (MW)</b>	<b>REC (MW)</b>	<b>Total(MW)</b>
<b>2013</b>	750	100	150	1000
<b>2014</b>	550	125	325	1000
<b>2015</b>	200	125	675	1000
<b>Total</b>	<b>1500</b>	<b>350</b>	<b>1150</b>	<b>3000</b>

#### ✓ **Promotion of solar roof-top systems:**

##### a) Domestic rooftop GBI:

All domestic consumers will be encouraged to put up roof-top solar installations. A generation based incentive (GBI) of Rs 2/unit for first two years, Re 1/ unit for next two years and Re 0.5/unit for subsequent 2 years will be provided for all solar or solar-wind hybrid rooftops being installed before 31March,2014. A capacity addition of 50 MW is targeted under this scheme.

Consumers desirous of availing GBIs shall necessarily install separate meters to measure rooftop generation.

b) Promoting rooftops in Government:

- Existing government buildings will be provided with solar rooftops in phased manner.
- All new government/local body buildings will necessarily be installed with solar roof-tops.
- All street lights and water supply installations in local bodies will be energized through solar power in a phased manner.

c) Promoting Solar Water Heating:

Government of Tamil Nadu, through various orders, has made the use of solar water heating systems mandatory for all new houses/buildings/marriage halls/hotels/ industries having hot water boiler (steam boiler) using fossil fuel etc.

✓ **Development of solar parks:**

Utility scale solar parks may comprise 250 MW in sizes of 1 to 5 MW, 600 MW in sizes of 5 to 10 MW and 650 MW of sizes above 10 MW. Solar Power projects will be developed through competitive/reverse bidding. Solar Parks with a capacity of about 50 MW each will be targeted in 24 districts.

✓ **Competitive bidding:**

State will select developers through competitive bidding. Investments through Joint Ventures by State Public Sector Undertakings will also be encouraged at competitive tariffs.

✓ **Guaranteed single window clearance in 30 days :**

Various statutory clearances that are essential for the development and commissioning of Solar Energy Projects will be handled by TEDA in co-ordination with the concerned departments/agencies. Guaranteed single window clearance will be provided through TEDA in 30 days so that the plants can be commissioned in less than 12 months.

✓ **Solar Manufacturing facilities:**

The government aims to promote indigenous manufacturing of solar panels and other related equipment. Land will be identified for development of solar manufacturing parks.

✓ **Net metering:**

- Net metering will be allowed (at multiple voltage levels) to promote rooftop penetration.
- Net metering facility will be extended to Solar power systems installed in commercial establishments and individual homes connected to the electrical grid to feed excess power back to the grid with "power credits" accruing to the Photovoltaic energy producer.

Projects to evacuate power at suitable voltages as suggested below:

Solar PV System Size	Grid Connected
<10kWp	240 V
10kWp<15 kWp	240 V/415 V
15kWp<50 kWp	415 V

50kWp<100 kWp	415 V
>100kWp	11 Kv

✓ **Wheeling and banking charges:**

The wheeling and banking charges for wheeling of power generated from the Solar Power Projects, to the desired locations for captive use/third party sale within the State will be as per the orders of the Tamil Nadu Electricity Regulatory Commission.

✓ **Electricity Tax:**

Exemption from electricity tax to the extent of 100% of electricity generated from solar power used for self consumption/sale to utility will be allowed for 5 years.

✓ **Other Features:**

The government would also be energizing over one lakh street lights through solar energy by 2015-16 and water supply installations in local bodies will be energized through solar power phase wise.

Tax concessions as per TN Industrial Policy will be allowed.

The detailed solar policy document can be downloaded from the following link:

[Tamil Nadu Solar Energy Policy 2012](#)

## **CHHATTISGARH SOLAR POLICY 2012-17**

The Govt. of Chhattisgarh has released the solar energy policy on 20<sup>th</sup> November 2012. This policy will be operative till 31<sup>st</sup> March 2017. Solar power plants approved, installed and commissioned during this period would be eligible for the benefits of this policy.

### **Salient Features:**

- ✓ The state govt. aims to achieve a target solar power generation capacity between 500MW to 1,000MW by March 2017. This would be achieved through three routes:
  - Grid Connected Solar Power Projects for Captive Use, Direct Sale to a licensee or any other person (Third Party) or a state other than Chhattisgarh.
  - Grid connected solar power projects for sale through Renewable Energy (Solar) Certificate Mechanism. The power generated from these projects can be purchased by State DISCOMs at Pooled Cost of Power Purchase as determined by CSERC from time to time. CSPDCL will take a final decision in this regard considering the supply and demand position of power in the state.
  - For sale to DISCOMs to fulfill Renewable Purchase Obligation (RPO).
- ✓ **The following type of solar projects will be encouraged:**
  - Grid Connected Solar Generation.
  - Solar Parks.
  - Rooftop Solar Power Projects.
- ✓ **Incentives under Industrial Policy of Chhattisgarh:**

The state has considered non-conventional sources of power generation as a priority industry under the State Industrial Policy 2009-14 and therefore has extended all the incentives including interest subsidy, fixed capital investment subsidy, exemption from electricity and stamp duty, exemption/concession in land premium, project report subsidy and technical patent subsidy. The state govt. will extend these facilities till March 2017 even after the end of tenure of the Industrial Policy.

### ✓ **Electricity Duty:**

State government shall exempt all solar power projects from paying **Electricity Duty** on auxiliary consumption and captive consumption within the state.

Following incentives will be extended to those solar power developers who commission their solar plant by March 2017. These incentives will be in force for a period of 7 years from the date of implementation of the project:

### ✓ **VAT:**

Exemption of VAT by the Commercial Tax Department for all equipments/materials required for solar power project.

✓ **Open Access Charges:**

Charges for Open Access and losses shall be applicable as approved by the CSERC/central regulatory body for third party sale outside the state.

✓ **Wheeling and transmission charges:**

Shall be applicable based on the CSERC regulations.

✓ **Cross Subsidy:**

Cross subsidy surcharge shall not be applicable for Open Access obtained for the Third Party Sale within the state subject to the industries maintaining their demand within the contracted range. Further it is also not applicable on captive users.

✓ **Banking:**

Energy banking facility allowed at mutually agreed terms and wherever necessary approval of appropriate electricity regulatory commission shall be obtained.

✓ **Grid Connectivity:**

Grid connectivity and evacuation facility shall be provided by the CG Transco or DISCOM at the cost of project developer. Further, if the developer wishes to lay the evacuation line by themselves, the same can be done without paying supervision charges to CGTRANSCO.

✓ **Land:**

Land acquisition and statutory clearances/approvals shall be obtained by the developer of the solar power plant as per policy of the state. Govt. land will be made available depending on the availability.

✓ **Timeline:**

Developers shall be required to commission the project within 24 months from the allotment.

✓ Nodal Agency shall carry out tasks related to:

- Bidding process of behalf of CSPDCL to fulfill Renewable Purchase Obligation (RPO).
- Identification of suitable locations and the creation of land bank.
- Facilitation of allotment of suitable land/space.
- Assistance in establishing Right of Way, water supply and connectivity through roads.
- Development of man power.

✓ Single Window Clearance System by Nodal Agency.

The detailed policy document can be downloaded from the following link:

[Chhattisgarh Solar Policy 2012-2017](#)

## DRAFT UTTAR PRADESH SOLAR POLICY 2012

The state of Uttar Pradesh (U.P.) in September 2012 has published a draft solar policy 'The Uttar Pradesh Solar Power Policy 2012'. The target is to reach 500 MW of installed capacity of SPP in the state by March 2017.

This policy will come into effect from the date of issuance and shall remain in operation up to 31st March 2017. However, no benefit of this policy will be available to projects set up under any incentive scheme of MNRE

### **Salient features:**

- ✓ Grid connected solar power projects will be implemented on suitable land banks identified and procured by the developer. In case of Projects to be set up on government land or space, selection of the developer will be done by the department or nodal agency through a transparent process.
- ✓ Minimum 5 MW capacity solar power projects will be covered under this policy.
- ✓ The energy generated from solar power projects that are commissioned during this policy period can be sold to distribution utility UPPCL or to third party or for captive use.
- ✓ **Sale of energy to local DISCOM:**
  - Projects developers willing to sell their electricity to the distribution company of the state will compulsorily have to participate in the competitive bidding process for tariff determination, subject to approval from UPERC.
  - In case the bids are received for an aggregate capacity more than 200 MW, selection of bidders shall be done on the basis of lowest quoted tariff in ascending order.
  - UPPCL will sign PPA with successful bidders for a period of ten years.
  - For PPAs signed as a result of competitive bidding, difference in the case if bidding tariff arrived at by UPPCL for purchase of conventional power and the price of solar power discovered through this bidding shall be payable to the distribution utility for power purchased from solar power projects for first 200 MW of solar power commissioned under this policy for a period of ten years. Budgetary support provided by the State Government to the Nodal Agency under the budgetary head "Incentive scheme for Solar Power Generation" will be utilized for these purposes.
- ✓ **Sale of energy to third party:**

Project developers can sell their power to a third party but no PPA would be allowed even in future date with distribution utility. Projects under this route will have to register with the nodal agency, sign an agreement and furnish a performance bank guarantee till the commissioning of the project to avail the incentives.

✓ **Captive sale of solar power:**

Solar power plants of above 5 MW capacity to be built for captive use will also be eligible for the incentives under this policy either within the premises of the user plant or outside with wheeling arrangement.

✓ **Timeframe:**

Time frame for commissioning of Solar PV projects will be 13 months and solar thermal projects would be 28 months.

✓ **Grid connectivity & evacuation infrastructure:**

- The responsibility of getting connectivity with the transmission system owned by the Discom/STU will lie with the Project Developer.
- The cost of the transmission line up to the “feed in substation” viz the point of interconnection where the metering is done shall be borne by the Solar Project Developer.
- The entire cost of transmission including cost of construction of line, wheeling charges, losses etc. will be borne by the Project Developer and will not be met by the STU/Discom.

✓ **Others:**

- Facilitation in all clearances approvals, permissions, training and consents required from the State Government/its agencies will be the main task of the Nodal Agency as single window.
- 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 detailed policy document can be downloaded from the following link:

[Draft Uttar Pradesh Solar Policy 2012](#)