

Solar Policy 2011

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**Government of Rajasthan
Energy Department**

NOTIFICATION

No.F.20 (6) Energy/2010

Dated: 19.4.2011

In order to promote generation of power from Solar Energy, the State Government hereby makes the **Rajasthan Solar Energy Policy, 2011** as under :-

1.1 Vision:

- 1.1.1 India is blessed with abundant solar energy and if harnessed efficiently, the country is capable of producing trillion-kilowatts of electricity. Solar energy is extremely Beneficial as it is non-polluting and its generation can be decentralized. There is need to come together and take initiatives to create technologies for a greater use of these sources to combat climate change by reducing the emission of green house gases.
- 1.1.2 Rajasthan is bestowed with significant amount of solar energy potential and an overwhelming response from Developers/IPPs has already been received for establishing solar power projects. Rajasthan Government is fully committed to the promotion of solar energy. Conducive Government of India Policy will yield astonishing achievements in solar energy generation in next 10-12 years.
- 1.1.3 The State of Rajasthan is poised to establish itself as a leader in solar power generation and a pioneer in providing energy security and sustainable growth to India. Endowed with conducive conditions with perennial and abundant solar radiation, Rajasthan has the potential to become the hub for solar power technologies and generation of sunrise green energy.
- 1.1.4 Rajasthan is favorably placed to become the largest provider of solar power among all sources of energy in India at a competitive cost and achieve the scale on solar power generation, which can change face of the State and transform the complete economic situation for betterment of the masses.
- 1.1.5 This Policy document is aimed at giving a direction to the above stated ambition of the Rajasthan state.

1.2 Preamble:

- 1.2.1 The State of Rajasthan receives maximum solar radiation intensity in India with very low average rainfall. It also has unutilized low cost desert land available in abundance. Therefore, Rajasthan is likely to emerge as the global hub for solar power in the country.
 - 1.2.2 Government of Rajasthan has already issued a Policy for harnessing Renewable Energy in Rajasthan in year 2004. Based on the progressive views adopted in past five years in respect of solar generation under this Policy, Rajasthan State is in the advanced stage of preparedness for installation of large scale Grid Interactive Solar Power Plants in next 5 to 10 years.
 - 1.2.3 Government of Rajasthan has also prepared land banks in various Districts for setting up of Grid Interactive Solar Power Projects in Rajasthan. The Solar Power Producers can access these land banks for selection of sites for development of Grid Interactive Solar Power Project in Rajasthan.
 - 1.2.4 The State Transmission utility (RVPN) has developed strong transmission system comprising of 400 kV GSS at Barmer, Jaisalmer, Merta, Jodhpur, Bikaner and Ratangarh along with associated 400 kV lines network duly supported by 220 kV and 132 kV strong transmission line and sub-station network in desert area. Therefore, suitable transmission system already exists for evacuating solar power in desert area, where the potential of solar energy is maximum. This infrastructure is being further enhanced by RVPN to meet the capacity build-up requirements for evacuating solar power in desert area.
 - 1.2.5 Challenge of climate change and global warming continuously threaten the world community and Rajasthan Government has also recognized the urgent need to tackle these challenges. Under the vision of National Action Plan on Climate Change (NAPCC), launched on June 30, 2008, the Jawaharlal Nehru National Solar Mission has been launched on 19.11.2009.
 - 1.2.6 To tap the potential of the emerging revolution in solar energy in Rajasthan and to leverage advantage from the Jawaharlal Nehru National Solar Mission launch by Government of India, the State Government has decided to issue a comprehensive Rajasthan Solar Energy Policy.
- 2. Title and enforcement:**
- 2.1 This Policy will be known as Rajasthan Solar Energy Policy, **2011**
 - 2.2 The Policy will come into operation with effect from 19.4.2011 and will remain in force until superseded or modified by another Policy.

2.3 State Government may undertake review of this Policy as and when the need arises in view of any technological breakthrough or to remove any inconsistency with Electricity Act 2003, Rules & Regulation made thereof or any Government of India Policy/State Electricity Regulatory Commission's order.

3. Definitions:

3.1 **Following expressions used in the Policy would have meanings assigned to them as defined hereunder:-**

- 1) **"Act"** means Electricity Act 2003, including amendments there to.
- 2) **"CEA"** means Central Electricity Authority.
- 3) **"CERC"** means the Central Electricity Regulatory Commission of India, constituted under sub-section (1) of Section 76 of the Electricity Act, 2003, or its successors.
- 4) **"Ceiling Act, 1973"** means the Rajasthan Imposition of Ceiling on Agricultural Holdings Act, 1973.
- 5) **"Central Agency"** means National Load Dispatch Centre (NLDC) as designated by the Central Electricity Regulatory Commission vide order dated 29.1.2010 for the purposes of the REC Regulations.
- 6) **"Collector"** means Collector of a district as defined in the Rajasthan Land Revenue Act and includes every officer authorized to discharge the duties of Collector under the Act/Rules/executive orders of the Government of Rajasthan.
- 7) **"Conventional Power Plants"** means lignite coal or gas based thermal generating power stations and hydro generating stations of more than 25 MW capacity.
- 8) **"Discom of Rajasthan"** means a distribution licensee, such as Discom Jaipur, Discom Jodhpur and Discom Ajmer.
- 9) **"District Level Committee" or "DLC"** means the committee constituted by the State Government for a District from time to time under Clause (b) of sub rule (I) of rule 2 of the Rajasthan Stamps Rules, 2004.
- 10) **"Force Majeure"** means any event or circumstance which is beyond the reasonable direct or indirect control and without the fault or negligence of the Solar Power Producer and which results in Solar Power Producers inability, not with standing its reasonable best efforts, to perform its obligations in whole or in part and may include rebellion, mutiny, civil unrest, riot, strike, fire, explosion, flood, cyclone, lightening, earthquake, act of foreign enemy, war or other forces, theft, burglary, ionizing radiation or contamination, Government action, inaction or restrictions, accidents or an act of God or other similar causes.

- 11) **"Generating Plant Sub-station"** means Sub-station developed by the Solar Power Producer for interface with the receiving sub-station.
- 12) **"Government" and "State"** means the Government of Rajasthan and the State of Rajasthan respectively.
- 13) **"Interconnection Line"** means Transmission/Distribution Line connecting Pooling Sub-station/Generation Plant Sub-station of Solar Power Producer to Receiving Sub-station of RVPN/Discom's of Rajasthan.
- 14) **"Inter-connection Point"** shall mean interface point of solar energy generating facility with the transmission system or distribution system, as the case may be, which shall be line isolator on outgoing feeder on EHV/HV side of the pooling sub-station/Generating Plant Sub-station.
- 15) **"IREDA"** means Indian Renewable Energy Development Agency.
- 16) **"Licensee"** includes a person deemed to be a licensee under Section 14 of the Act.
- 17) **"MNRE"** means Ministry of New and Renewable Energy, a Central Government Ministry responsible to develop and deploy new and renewable energy for supplementary energy requirement of the country.
- 18) **"National Solar Mission or Solar Mission"** means Jawaharlal Nehru National Solar Mission 2009 launched by Government of India.
- 19) **"Nodal agency"** means Rajasthan Renewable Energy Corporation Limited (RREC) or any other agency designated by Government of Rajasthan for promotion of electricity generation from renewable energy sources.
- 20) **"NVVN"** means NTPC Vidyut Vyapar Nigam wholly subsidiary company of NTPC.
- 21) **"Phase-1"** means remaining period of the 11th Plan & first year of 12th Plan (2012-13) as expressed in National Solar Mission.
- 22) **"Phase-2"** means remaining four year of the 12th Plan (2013-17) as expressed in National Solar Mission.
- 23) **"Pooled Cost of Power Purchase"** means the weighted average price at which the Discoms of Rajasthan has purchased the electricity including cost of self generation, if any in the previous year from all the energy suppliers, excluding short term power purchases and those based on renewable energy.
- 24) **"Pooling Sub-station"** means a Sub-station developed by Solar Power Producer for interface with the Receiving Sub-station.

- 25) "**Power/Energy**" means electricity produced using the renewable energy sources.
- 26) "**PPA**" means Power Purchase Agreement.
- 27) "**Receiving Sub-station**" means EHV/HV Sub-Station developed by RVPNL/Discom of Rajasthan for evacuation of power generated from Renewable Energy Sources.
- 28) "**REC Regulation**" or "**CERC REC Regulation**" means Central Electricity Regulatory Commission (Terms & Condition for recognition and issuances of Renewable Energy Certificate for Renewable Energy Generation) Regulation, 2010 notified by CERC vide Notification dated 14.1.2010 and amended time to time.
- 29) "**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 provision specified in the Central Electricity Regulatory Commission (Terms & Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulation, 2010.
- 30) "**Renewable Energy Power Plants**" means the power plants other than the conventional power plants generating grid quality electricity from Renewable Energy Sources.
- 31) "**Renewable Energy Sources**" means and includes non-conventional renewable generating sources such as solar including its integration with combined cycle, as approved by the Ministry of New & Renewable Energy, Government of India.
- 32) "**RERC**"/"**Commission**" means Rajasthan Electricity Regulatory Commission.
- 33) "**RREC**" means Rajasthan Renewable Energy Corporation Ltd.
- 34) "**RVPN**" means the Rajasthan Rajya Viduit Prasaran Nigam Limited.
- 35) "**SLEC**" means State Level Empowered Committee constituted under the provisions of this Policy.
- 36) "**RPO**" means Renewable Purchase Obligation.
- 37) "**SLSC**" means State Level Screening Committee constituted under the provisions of this Policy.
- 38) "**Solar Power Producer**" means an entity, which owns facilities to generate electric power for sale to Discom of Rajasthan/Licensees/NVVN and to third party/captive use.
- 39) "**Solar Plant/Solar Power Plant**" means a power plant or system utilizing solar energy through solar photo-voltaic or concentrated solar thermal devices including its integration into conventional fossil fuel for generating of electricity.

- 40) **“Solar PV Power Plant”** means the Solar Photo Voltaic (SPV) Power Plant that uses sunlight for direct conversion into electricity through Photo Voltaic technology.
 - 41) **“Solar Thermal Power Plant”** means the Solar Thermal Power Plant that uses sunlight through Concentrated Solar Power (CSP) technology based on either line focus or point focus principle conversion in to heat/steam which can be used for producing electricity.
 - 42) **“State Agency”** means Rajasthan Renewable Energy Corporation Ltd. or any other agency designated by the Rajasthan 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 provision specified in the CERC REC Regulation
 - 43) **“State Load Dispatch Centre” or "SLDC"** means the centre established by the State Government for the purposes of exercising the powers and discharging the functions under Section 31 of the Electricity Act, 2003.
 - 44) **“Tariff”** means the schedule of charges for generation, transmission, wheeling and supply of electricity together with terms and conditions for application there of.
 - 45) **"WBA"** means Wheeling and Banking Agreement.
- 3.2 The terms not defined above will have their usual meaning.

4. Objectives:

The objective of this Policy is to establish Rajasthan as a National leader in solar energy in phased manner by creating the policy frame work for promoting use of solar energy in various applications and move towards achieving following objectives:

- a) Developing a global hub of solar power of 10000-12000 MW capacity in next 10-12 years to meet energy requirements of Rajasthan and India.
- b) Contributing to long term energy security of Rajasthan as well as ecological security by reduction in carbon emissions
- c) Providing a long term sustainable solution for meeting energy needs and considerably reducing dependence on depleting fossil fuel resources like coal, oil and gas.
- d) Productive use of abundant wastelands, thereby utilizing the non-industrialized desert area for creation of an industrial hub.
- e) Creating favorable conditions to solar manufacturing capabilities by providing fiscal incentives.
- f) Generating large direct and indirect employment opportunities in solar and allied industries like glass, metals, heavy industrial equipments etc.

- g) Creation of skilled and semi-skilled man power resources through promotion of technical and other related training facilities.
- h) Creating an R&D hub for deployment of various combinations of solar power technologies and solar based hybrid co-generation technologies which will focus on improving efficiency in existing applications, reducing cost of balance of system.
- i) To achieve the grid parity in next 7-8 years, the State will encourage the Solar Power Developers to establish manufacturing plant of their technology in Rajasthan.
- j) Establishment of an industrial set-up involving both domestic and foreign manpower participation which will promote Rajasthan as a global tourist destination.
- k) Create a solar centre of excellence which would work towards applied research and commercialization of nascent technologies to accelerate the march to grid parity.

5. Targets:

To achieve the objectives of this Policy, the targets are as under:

5.1 Grid Interactive Solar Power Project:

5.1.1 Under MNRE Generation Based Incentive Scheme (Ongoing Scheme):

The State Government has sanctioned two Solar Power Projects of 5 MW capacity under the GOI guidelines for Generation Based Incentive for Grid Interactive Solar Power Generation Projects issued by MNRE vide letter No. 32/61/2007-08/ PVSE dated 24.1.2008. The State shall support early execution of MNRE sanctioned solar power projects.

5.1.2 Solar Power Plants sanctioned under the orders of RERC:

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. MNRE, GoI has already sanctioned these projects under migration scheme of NSM. 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.

5.1.3 Development of 50 MW SPV and 50 MW Solar Thermal Power Plants by selection of Solar Power Producers through tariff based competitive bidding process on concept of bundling of Solar Power with equivalent amount of MW capacity of conventional power:

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 entire power from the Solar Power Plant and equivalent amount of MW capacity of Conventional Power Plant shall be purchased by Discoms of Rajasthan on tariff determined by process of competitive bidding and approved by RERC.

5.1.4 Setting up of Solar Power Plants under National Solar Mission (NSM) for promotion of investment in Rajasthan:

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 power produced from these power plants commissioned in phase-1 of National Solar Mission shall be sold to NVVN as per the guidelines issued by MNRE/NVVN. NVVN will subsequently, sell this power along with equivalent amount of MW capacity of conventional power from unallocated quota of NTPC stations to the States. The mechanism for power purchase for subsequent phases of NSM shall be as per guidelines issued by MNRE. The Discoms of Rajasthan shall have right of refusal to the power offered to the State Discoms under policy of NSM. The Discoms of Rajasthan will exercise their right of refusal once after the registration of project and before approval of project by SLEC.

5.1.5 Setting up of Solar Power Plants in Rajasthan for direct sale to Discoms of Rajasthan:

The Rajasthan State will promote setting up of solar power projects for direct sale to Discoms of Rajasthan. **The total capacity under this category will be distributed equally between SPV and CSP based power plants.** The total maximum capacity under this category for phase-1 (up to 2013) and phase-2 (2013-2017) would be as follows:-

	Phase-1 (up to 2013)	Phase-2 (2013 -2017)
Maximum Capacity to be developed	200 MW	400 MW (Additional)

Selection of these Solar Power Projects shall be through tariff based competitive bidding process. The State Government may undertake the review of targets mentioned above as and when the need arises in view of any technological breakthrough resulting in substantial decrease in cost of Solar Power generation.

5.1.6 Utility Grid Power Projects for Captive use /direct sale to 3rd Party/States other than Rajasthan through Open Access for promotion of investment in Rajasthan:

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.

5.1.7 Setting up of Rooftop PV and other Small Solar Power Plants connected to LT/11kV Grid:

- I. 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 Roof top PV & Small Solar Generation Programme (RPSSGP) of NSM and orders of appropriate Regulatory Commission.
- II. 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.

5.1.8 Utility Grid Power Projects for sale through RE (Solar) Certificate Mechanism:

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 Solar Power Producers will be required to apply for accreditation to the State Agency and thereafter to Central Agency for registration and issuance of RE (Solar) certificate under REC mechanism as per order/regulations of appropriate Commission issued in this regard. The Power generated from these power projects shall be purchased by Discoms of Rajasthan at Pooled Cost of Power Purchase as determined by the appropriate Commission from time to time. The Solar Power Producers will sell RE (Solar) Certificates as per the regulations/orders of appropriate Commission.

5.1.9 Setting up of Solar Power Plant for promotion of manufacturing facilities in the State:

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. This will result in establishment of 500 MW per annum of SPV manufacturing capacity in the State.

Those Solar Power Producers who establish SPV manufacturing plants (thin film technology modules or crystalline technology modules involving processing from wafers stage) of minimum 25 MW per annum capacity in Rajasthan will be eligible for sanction of SPV based Solar Power Plant. The capacity allocation for manufacturing plant will be as follows:-

Sr.No.	Per annum production capacity of Manufacturing Plant	Capacity allocation for SPV based Solar Power Plant
1.	More than 25 MW but less than 50 MW	10 MW
2.	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.

5.2 Decentralized and Off-Grid Solar Applications:

5.2.1 The Rajasthan State will also promote decentralized and off-grid solar applications, including hybrid system as per guidelines issued by MNRE to meet various electrical and thermal energy requirements. Some of the major applications of solar thermal technologies include solar water heaters, solar cooling systems, air drying, steam cooking, power generation, sterling engine. The off grid photovoltaic applications include solar PV home lighting, police stations, communication and lighting, Small powered looms, solar inverter, solar PV pumps, powering computers in schools, Small milk chilling plants, refrigeration for medicine in primary health centers and Hybrid systems for Powering telecom towers etc. The off-grid solar applications shall be promoted for replacement of diesel based generators sets. Guidelines and incentives issued by MNRE from time to time shall be followed in State for promotion of decentralized and off-grid solar applications.

5.2.2 The Rajasthan State will also consider incentives for promotion of decentralized and off grid solar applications.

5.3 Setting up of Pilot Demonstration Projects under National Solar Mission's R& D initiatives in Phase – 1 of Solar Mission:

Under the Mission, MNRE is supporting to promote technology development and cost reduction by setting up of following demonstration projects:

- 1) 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%)
- 2) A 100 MW Parabolic trough technologies based solar thermal plant.
- 3) A 100-150 MW Solar hybrid plant with coal, gas or bio-mass to address variability and space-constraints.
- 4) 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.
- 5) Grid connected rooftops PV systems on selected Government buildings and installations, with net metering.
- 6) Solar based space cooling and refrigeration systems to meet day time and summer season peak load. These could be installed on selected Government building and installations.

"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."

5.4 Development of Solar Parks in State:

- 5.4.1 The Rajasthan State will develop Solar Parks of more than 1000 MW capacity in identified areas of Jodhpur, Jaisalmer, Bikaner and Barmer districts in various stages. The State Government, under this policy, will act as the facilitator to attract global investment in Rajasthan and will provide the necessary infrastructure, regulatory and other Government support required through the Nodal Agency to rapidly ramp up Solar Power generation capacity in the State. Solar Park shall consist of various zones viz. Solar Power Plants, Manufacturing Zones, R & D and Training Centers zone and other amenities zones. The State will extend all facilities and fiscal incentives provided by Central Government/ National Solar Mission to manufacturers in Solar Parks.
- 5.4.2 RREC will act as a Nodal Agency for development of Solar Parks in Rajasthan. A special purpose vehicle (SPV) in form of a subsidiary company of RREC will be established for development of infrastructure and management of Solar Park.
- 5.4.3 The SPV will formulate Policy and Rules in respect of land allotment, sharing of development cost by the Solar Power producers and manufacturers.
- 5.4.4 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.

5.4.5 The State will evolve a separate special package of additional fiscal incentives for solar based industries in Solar Park in consultation with Finance Department & Industries Department, Govt. of Rajasthan.

5.4.6 The arrangement for sale/purchase of power generated from the power plants located in the Solar Parks will be governed by the relevant provisions of this Policy. The State will endeavor to get special allocation from NSM for Solar Parks.

5.5 Promotion of Solar Thermal Collectors:

5.5.1 Solar Water Heating System (SWHS):

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) in the following potential categories :-

- a) All Industrial buildings where hot water is required for processing.
- b) All Government/Private Hospitals and Nursing homes.
- c) All Hotels, Resorts, Motels, Banquet halls, Catering Units and Industrial Canteens.
- d) Residential buildings built up on a plot size of 500 sq yard and above within the limits of Municipal Board/Council/Corporations including Housing Complexes set up by Group Housing Societies/Housing Boards.
- e) Hostels in educational institutions/Pvt. Hostels, Testing Labs/Laboratories of Educational Institutes/Hospitals
- f) Barracks of Police, Paramilitary Forces and Jails.
- g) Private/Government Guest Houses, Govt. Tourist Hotels, Dak Bungalow, Circuit House and retiring rooms of Railways.
- h) Health Centres, Sports Complex.
- i) All weather swimming pools.

5.5.2 Solar Steam Systems:

The Rajasthan State will promote the use of solar steam systems for wider applications such as

- a) Community cooking in residential institutions/ industrial mess/Hotels /Barracks/ mid day meal program/Hospitals etc.
- b) Industrial application of steam in process industries such as Textile/Food industry etc.
- c) Laundries
- d) Space conditioning using Vapour Absorption Machines (VAM's).

5.5.3 Industrial Applications:

The Rajasthan State will promote the use of Solar Water Heating System (SWHS), Solar Steam Systems etc for Industrial applications such as:

- a) Process requirements of hot water.
- b) Process requirements of steam.
- c) Pre-heating applications in variety of Industries.
- d) Drying applications.
- e) Steam press and laundry units
- f) Space conditioning using Vapour Absorption Machines.
- g) Solar steam cooking applications in industrial mess/hotels etc.

6. Minimum/Maximum Capacity allocation to each Solar Power Producer:

- 6.1 The minimum/maximum capacity allocation to each Solar Power Producer for the Grid connected Solar Power Plants sanctioned under National Solar Mission (Clause 5.1.4) will be as per MNRE guidelines.
- 6.2 The capacity allocation for pilot demonstration project will be finalized in consultation with MNRE.
- 6.3 The minimum/maximum capacity allocation to each Solar Power Producer for power projects sanctioned under Clause 5.1.5 in Phase-1 will be as under:

S. No.	Technology	Minimum capacity	Maximum capacity
1.	Solar Photovoltaic (SPV)	5 MW	10 MW
2.	Solar Thermal (CSP)	5 MW	50 MW

- 6.4 The minimum/maximum capacity allocation to each Solar Power Producer for power projects sanctioned under Clause 5.1.5 in Phase-2 will be decided by the State Government at the time of capacity allocation for Phase-2.
 - 6.5 There will be no upper ceiling for power projects sanctioned under Clause 5.1.6 & 5.1.8.
 - 6.6 The minimum/maximum capacity for power project sanctioned under Clause 5.1.7 (i) will be as per the guidelines issued by MNRE.
- ### 7. Purchase of Solar Power by Discoms of Rajasthan:
- 7.1 The Discoms of Rajasthan will purchase power produced by the projects sanctioned under Clause 5.1.1, 5.1.2, 5.1.3, 5.1.5, 5.1.7 (i), 5.1.7 (ii), 5.1.8 and 5.1.9 of this Policy.
 - 7.2 The Discoms of Rajasthan will purchase power produced by the Solar Power Plants sanctioned under clause 5.1.4, only with the prior approval of the State Government.

- 7.3 The Discoms of Rajasthan will purchase power produced from demonstration projects mentioned at Clause 5.3 as per NSM guidelines.
- 7.4 The Discoms of Rajasthan will purchase the solar power as mentioned at 7.1, 7.2 & 7.3, even if the total quantum of power exceeds Renewable Purchase Obligations prescribed by RERC. In case of any shortfall in meeting the RPO after purchase of power as mentioned at 7.1, 7.2 & 7.3 the Discoms of Rajasthan will purchase remaining quantity of solar power from National Solar Mission Schemes or from the Solar power plants selected through the bidding process as per clause 5.1.5 and 11.3 or by acquiring Renewable Energy (Solar) Certificate.
- 8. Registration of Power Project:**
- 8.1 The Solar Power Producer will submit the application to RREC in prescribed format appended with the Policy at **Annexure-I** along with following required documents, as applicable.
- i. A certified copy of the Memorandum & Article of Association of the Company.
 - ii. Certified copy of the registration certificate.
 - iii. Certified copy of the partnership deed.
 - iv. Certified copy of the Authority conferring powers on the person(s) who are competent to execute the MOU/the agreement with GoR/RREC/RVPN/ Discom of Rajasthan /NVVN.
 - v. Solar Data Assessment Report for the site where the plant is to be developed.
 - vi. Detailed Project Report (in two hard copies and one soft copy).
 - vii. Demand Draft for processing fees @ **Rs. 50000** per MW + Service Tax in favor of Rajasthan Renewable Energy Corporation Ltd. payable at Jaipur.
 - viii. Annual Report of the Company for last three years.
- 8.2 The Solar Power Producer will deposit an amount of **Rs. 50000/-** per MW with RREC towards processing fee, which shall be non-refundable. The service taxes etc. shall also be payable extra as applicable from time to time.
- 8.3 The Power Projects, which have been registered under Policy, 2004, will be deemed to have been registered under this Policy-2011 on the same registration Number allotted earlier. These power projects will be governed by provisions of this Policy.
- 8.4. For projects under Clause 5.1.4 & 5.1.7 (i), if there is any requirement of registration with NVVN/MNRE/IREDA for sanction of project under National Solar Mission guidelines, the Solar Power Producer will have to register his project with NVVN/MNRE/IREDA as per their guidelines in addition to registration of project with RREC as above.

8.5 For the projects under RE (Solar) certificate mechanism (clause 5.1.8), in addition to the registration with RREC as above, the Solar Power Producers will have to deposit accreditation/registration fee with State Agency / Central Agency as per procedure laid down by the regulations/orders of the appropriate Commission.

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

RREC will act as Nodal Agency for single window clearance of the projects for following activities:

- a) Registration of projects.
- b) Approval of capacity of projects under Clause 5.1.6 & 5.1.8.
- c) Selection of projects under clause 5.1.3, 5.1.5, 5.1.7(ii) & 5.1.9 by process of tariff based bidding.
- d) Loans from IREDA/PFC/REC/Financial Institutions/Commercial Banks.
- e) Allotment of revenue land.
- f) For Solar Thermal Power Plants, water allocation from concerned department.
- g) Approval of power evacuation plan and allocation of bays etc.
- h) Arranging other statutory clearances/approvals.
- i) Execution of PPA/WBA with RVPN/Discoms of Rajasthan/NVVN (as applicable)
- j) Co-ordination with MNRE/NVVN/Discoms of Rajasthan/RVPN and other State Agencies.
- k) Accreditation and recommending the solar power project for registration with Central Agency under REC mechanism.

10. State level Screening Committee (SLSC):

The State Level Screening Committee (SLSC) consisting of the followings will be constituted for in principle clearance of the projects:-

- i. Principal Secretary/Secretary, Energy, Government of Rajasthan.
- ii. Chairman & Managing Director, RREC.
- iii. Chairman & Managing Director, RVPN.
- iv. Chairman & Managing Director/Managing Director JVVNL/AVVNL/ JDVVNL.
- v. Director (Finance), RVPN.
- vi. Director (Technical), RREC - Convener

11. In Principle Clearance of Projects:

11.1 In principle clearance of Solar Power Projects under Clause 5.1.6 & 5.1.8:

In principle clearance of projects under clause 5.1.6 & 5.1.8 will be granted by the State Level Screening Committee after evaluating/examining the project proposals on the following criteria:

- i. Detailed Project Report.
- ii. Financial Capability of the Power Producer.
- iii. Technical Capability of the Power Producer.
- iv. Status of Technical Collaboration with proven technology supplier.
- v. Capability for execution of projects.
- vi. Status of land identification & its availability.
- vii. Status of Power Evacuation System for proposed project.
- viii. For solar thermal plant, availability of Water, if required.
- ix. Documentary evidence of power purchase arrangements in case of direct sale to 3rd party through open access.
- x. For projects under REC mechanism, undertaking from the Solar power producers regarding accreditation and registration with State Agency/Central Agency.

The detailed criteria of (ii) and (iii) are given at **Annexure-II**.

11.2 In principle clearance of Projects under Clause 5.1.4:

The projects under clause 5.1.4 will be considered as in principle cleared on sanction of projects by NVVN/MNRE as per the guidelines of NSM.

11.3 In principle clearance of Projects under Clause 5.1.3, 5.1.5, 5.1.7(ii) & 5.1.9:

In principle clearance of the projects under clause 5.1.3, 5.1.5, 5.1.7(ii) & 5.1.9 will be granted by SLSC. RREC will be nodal agency for carrying out the tariff based bidding process on behalf of Discoms of Rajasthan. The bid process will be conducted by RREC under guidance of SLSC. SLSC will be empowered committee for granting all necessary approvals related to bid process. Approval from RERC will be taken wherever necessary.

11.4 In principle clearance of projects under clause 5.1.7 (i):

The projects under clause 5.1.7 (i) will be considered as in-principle cleared on sanction by MNRE/IREDA.

12. Security Deposit:

12.1 For projects under Clause 5.1.1, 5.1.2, 5.1.4 & 5.1.7 (i):

The Solar Power Producers shall deposit security amount with concerned Agencies viz. NVVN, IREDA, MNRE etc. As per terms & conditions of the guidelines issued by MNRE/NVVN/IREDA.

12.2 For projects under Clause 5.1.6 & 5.1.8:

After in principle clearance of the projects by the State level Screening Committee as per clause 11.1, the Solar Power Producers will be required to deposit security amount @ Rs. 5.00 Lac per MW by Demand Draft and Rs. 20.00 Lacs per MW in the form of Bank Guarantee within one month from the date of issue of in principle clearance. In case Power Producer fails to deposit security money within stipulated time, the in principle clearance shall be cancelled without any notice. The security amount deposited by the Solar Power Producers shall not be convertible or transferable and shall only be refunded to the Solar Power Producer on his written request after commissioning of the Project. In case Power Producer fails to commission the Power Plant in time schedule including extension as per Clause 24.5, the security deposit shall be forfeited.

12.3 For projects under clause 5.1.3, 5.1.5, 5.1.7(ii) & 5.1.9:

The security deposit will be governed by provision of bid document and power purchase agreement.

13. Development charges by the Solar Power Producers:

For Solar power projects established for sale of solar power to parties other than Discoms of Rajasthan, the Solar Power Producer shall deposit 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. In case Power Producer fails to deposit development charges within stipulated time, the in-principle clearance shall be cancelled without any notice. The development charges deposited by the Solar Power Producers shall be non-refundable. For solar power projects established for sale of solar power to Discoms of Rajasthan State, no development charges will be livable from the Solar Power Producers.

14. Procurement/Allotment/Reservation of land:

14.1.1 Reservation of Govt. Land for the Project:

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.

14.1.2 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.

14.1.3 After the reservation of land for a particular solar power project, the solar power producer will be allowed to carry out survey on the reserved land on his written request to RREC.

14.2 Allotment of Govt. land for the Solar Power project:

14.2.1 The allotment of land to the Solar Power Projects will be done as per the provisions of 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.

14.2.2 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) as per the provision of rules mentioned at 14.2.1.7

14.2.3 The RREC will recommend to the concerned District Collector for allotment of 1 Hect. Land under the rules mentioned at 14.2.1 for installation of Solar Monitoring Station for carrying out studies for formulation of the project.

14.2.4 The RREC will recommend to the concerned District Collector for allotment of remaining land only on submission of cash security deposit of Rs.1.00 Lac per MW by demand draft in favour of RRECL, Jaipur. The Security Deposit will be refunded on successful completion of the project. The Security Deposit will be forfeited in case the allotment of the land is cancelled as per the provision of the rules mentioned at 14.2.1.

14.2.5 In case the land allotment is sought after submission of Security Deposit as per clause 12, there will be no requirement of depositing Security as per clause 14.2.4 for recommendation of land for allotment to concerned District Collector.

14.2.6 There will be a ceiling of 50 MW capacity for allotment of land in initial Phase. In case, the Power Producer has registered for more than 50 MW, the remaining land identified by the Power Producer shall be kept reserved as per provision of Clause 14.1.1. The allotment of land from the reserved land shall be done only after utilization of land allotted earlier.

14.2.7 In case the sanctioned capacity of project is in excess of 50 MW, land in excess of 50 MW will be allotted with prior approval of State Level Empowered Committee (SLEC).

14.2.8 For setting up Solar Power Plant on different technology, maximum allottable land to the Solar Power Producer shall be as follows:

.S. No.	Technology	Max. allot able land
I.	SPV on Crystalline Technology	2.5 Hect./MW
II.	SPV on Thin Film/Amorphous Technology	3.5 Hect./MW
III.	Solar Thermal (CSP)-Parabolic Trough/Tower Technology	2.5 Hect./MW
IV.	Solar Thermal (CSP)-Parabolic Trough with Storage Facility/Tower/Other Technology with and without storage	a) Up to PLF of 23%: 2.5 Hect./MW b) For every 1% increase in PLF, 0.1 Hect. /MW additional land will be allotted.

14.2.9 The process of allotment of land will be completed within the 60 days from the date of recommendation by RREC to the concerned District Collector.

14.3 Procurement of Private land for Solar Power Project/Solar manufacturing plant:

14.3.1 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.

14.3.2 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.

14.4 Allotment of land for manufacturing unit:

14.4.1 The Revenue land for establishing manufacturing units will be allotted as per the provisions of Rajasthan Land Revenue (Industrial Areas Allotment) Rules, 1959.

14.4.2 The land for establishing manufacturing units in the RIICO Industrial Area will be allotted by RIICO as per their Rules and Regulations.

14.4.3 The land for establishing manufacturing units in Solar Park will be allotted as per the provisions of clause 5.4 of this Policy.

15. SLEC Clearance of Power Projects:

All in principle cleared projects will be submitted to the State Level Empowered Committee (SLEC) for final approval. The State Level Empowered Committee will consist of following members:-

1. Chief Secretary, GoR (Chairman)
2. Principal Secretary, Revenue, GoR (Member).
3. Principal Secretary/Secretary, Energy, GoR (Member).
4. Principal Secretary, Water Resources Department, GoR (Member).
5. CMD, Rajasthan Vidyut Prasaran Nigam Ltd, (Member).

6. Principal Chief Conservator of Forest, Rajasthan (Member).
7. District Collector of concerned District- Special Invitee.
8. CMD, Rajasthan Renewable Energy Corporation Ltd., (Member- Secretary).

16. Power Purchase Agreement:

The Power Purchase Agreement between the Solar Power Producer and Procurer of power will be executed in the following manner:-

16.1 Project Sanctioned under MNRE Generation Based Incentive Scheme (Clause-5.1.1):

Under this scheme, the Power Purchase Agreement has been executed between the Discoms of Rajasthan and the Solar Power Producer on the tariff determined by the RERC as per the guidelines of MNRE.

16.2 Solar Power Project connected to grid at 33 kV & above level under the Clause 5.1.2:

Under this scheme, the Power Purchase Agreement has been executed between NRVN and the Solar Power Producer as per guidelines of MNRE/NRVN and tariff order of the CERC. The Discoms of Rajasthan has entered into Power Sale Agreement with NRVN for purchase of solar power generated from these power plants along with equivalent MW of conventional power as per the mechanism provided in NSM phase 1.

16.3 Solar Power Project connected to grid at 33 kV & above level under the Clause 5.1.3:

Under this scheme, the Discoms of Rajasthan will sign the PPA with successful bidder for purchase of solar power generated from the Solar Power Plants along with equivalent amount of MW capacity of conventional power as per the mechanism provided in bidding documents on the lowest tariff arrived after tariff based competitive bidding process and approved by the RERC.

16.4 Solar Power Project connected to grid at 33 kV & above level under the National Solar Mission (Clause – 5.1.4):

For the projects sanctioned under phase-1 of NSM, the Power Purchase Agreement will be executed between the NRVN and the Power Producer as per guidelines of MNRE and the tariff as agreed with NRVN. The NRVN will sell the solar power generated from these Solar Power Plants along with equivalent amount of MW capacity of conventional power as per the mechanism provided in NSM Phase-1. The power purchase agreement for projects sanctioned in phase-2 &3 of NSM will be as per guidelines issued by MNRE.

16.5 Solar Power Project sanctioned under clause 5.1.5, 5.1.7(ii) & 5.1.9:

For the projects sanctioned under clause 5.1.5, 5.1.7(ii) and 5.1.9, the Power Purchase Agreement will be executed between Discoms of Rajasthan and successful bidders as per

the provisions of bid documents on the tariff arrived by the process of tariff-based bidding.

16.6 Third party sale/captive use/sale to other States through Open Access (Clause – 5.1.6):

In case of third party sale/captive use/sale to other States, the Power Purchase Agreement will be executed between the Power Producer and the procurer on mutually agreed rates.

A separate agreement will be executed for Wheeling and banking of power with Discoms of Rajasthan for such banking. The wheeling agreement with RVPN will be executed separately, if the Solar Power Producer intends to use the system of RVPN for wheeling power.

16.7 Rooftop PV and other Small Solar Power Plants connected to LT/11 kV under NSM {Clause 5.1.7 (i)}:

Under this scheme, the Power Purchase Agreement shall be executed between the concerned Discom of Rajasthan and the operator of small solar power plant as per guidelines of MNRE/IREDA and tariff orders of RERC. A generation-based incentive will be admissible to the Discoms of Rajasthan to cover the difference between the solar tariff and base price as per the guidelines issued by MNRE and orders of appropriate Commission.

16.8 Sale of Power through RE (Solar) certificate mechanism (Clause 5.1.8):

In case of solar power projects established for sale of power through REC mechanism, the Power Purchase Agreement will be signed between Solar Power Producers and the Discoms of Rajasthan as per the regulations/orders of appropriate commission issued from time to time in this regard.

16.9 Pilot Demonstration projects under the Mission's R & D initiatives (Clause–5.3):

For Demonstration projects set up in consultation with MNRE (Clause 5.3), the Power Purchase Agreement will be executed between the procurer and the Solar Power Producer as per MNRE guidelines.

17. Creation of Rajasthan Renewable Energy Infrastructure Development Fund:

State Government will create a separate Rajasthan Renewable Energy Infrastructure Development Fund for accelerated development of solar/renewable energy in Rajasthan. The resources mobilized by collection of development charges as per Clause 13 will be credited to Rajasthan Renewable Energy Infrastructure Development Fund. The State Government will evolve other suitable mechanism for generating financial resources for further strengthening of this fund. This fund will be utilized for creation of infrastructure

such as transmission network, roads etc. for accelerated development of renewable energy as per the guidelines issued by State Government in this regard.

18. Open Access for Third Party Sale:

Open access will be granted to any Solar Power Producer or beneficiary. They shall have to pay the applicable open access charges and losses as approved by RERC/CERC from time to time.

19. Forecasting and Scheduling:

The Solar energy generated for sale will not be covered under scheduling procedure for Intra-State ABT. However, the actual solar energy injected in the grid during particular time block of 15 minutes shall be post-facto considered in drawl schedule for sale of power to licensee/third party or for giving set-off against the consumption of recipient unit in case of wheeling. However, total available Solar Power Plant generating capacity shall be intimated to RVPN/Discoms of Rajasthan for next day.

20. Metering of Power from Solar Power Plants, Rooftop and Small Solar Power Plants:

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.

21. Grid Interfacing:

21.1 The grid interfacing arrangements for power using Solar as Renewable Energy Sources will be made by Solar Power Producer/RVPN/Discoms of Rajasthan as detailed in following clauses.

21.2 Generating Plant Sub-Station:

21.2.1 The Generating Plant Sub-station shall be developed and maintained by the Solar Power Producer as per the Grid Code applicable from time to time and the entire cost for this will be borne by them. Plant should be integrated by installing RTUs by solar power producers so that the fed power can be monitored at receiving Sub-station by the SLDC on real time basis.

21.2.2 The Solar Power Producer shall furnish the requisite (i) Steady State Load Flow studies and (ii) Short circuit studies etc. for seeking connectivity with the Grid in reference to the provisions of the clause no. 6 "General Connectivity Conditions" of the Central Electricity Authority's "Technical Standards for Connectivity to the Grid Regulation, 2007."

21.2.3 Solar Power producers shall ensure that average power factor during 15 minutes interval measured at metering point of the solar power plant is maintained as per requirements of

State Load Dispatch Centre conveyed to them from time to time. Solar PV Power Producers shall ensure such average power factor of 0.95 (lagging) to 1.0 power factor.

21.3 Receiving Sub-station:

21.3.1 33kV and above Grid Connected Solar Power 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 of 132/33 kV Sub-station or 400/220/132/33 kV Sub-station.

21.3.2 11kV Grid Connected Solar Power Plants:

Discoms of Rajasthan shall finalize the location of receiving station for small solar power plant in consultation with RREC on which the electricity generated will be received at minimum 11 kV level of 33/11 kV Sub-station.

21.3.3 LT connected Solar Power 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.

21.4 Grid Connectivity:

21.4.1 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. These charges will be paid by the Solar Power Producer to RVPN/Discoms of Rajasthan within 3 months of final approval of project. These charges include cost of complete line bay (including civil works) and its interconnection with existing electrical system. Line Bay includes breakers, CTs, CVT/ PTs, isolators, protection and metering equipments, bus bar material and other allied materials as applicable.

21.4.2 In case line bay and grid connectivity has been made by RVPN at a particular System Voltage (say 33 kV) and Solar Power Producer at a later date wants to supply the power on higher voltage (say 132 kV), on feasibility the requisite modification, viz. addition of line bay on higher voltage, interconnection with main bus etc. shall be done by RVPN as a deposit work on behalf of the Power Producer. In case power evacuation from any solar power plant is made through temporary arrangement due to incomplete approved evacuation system, no charges will be payable by Solar Power Producer for shifting to the approved evacuation system.

21.4.3 In case Power Producer first connects his feeder to Discom's substation and later on wants to connect his feeder to RVPN's Sub-station, the additional line shall be constructed by

Power Producer and the addition of line bay in RVPN substation shall be done by RVPN as deposit work on behalf of Power Producer.

21.4.4 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.

21.5 Transmission and Distribution Network Augmentation:

The Commission under regulation 89 of the RERC Tariff regulation 2009 has specified that capacity augmentation of a substation and backup transmission system for power evacuation from RE power station to the load centre shall be planned and carried out by the State Transmission Utility (STU). For augmentation of transmission/distribution systems to evacuate the power from Receiving Sub-station, RVPN/Discoms of Rajasthan shall develop/augment the necessary transmission/distribution network within mutually agreed timeframe.

21.6 Transmission line from Generating Plant Sub-station to Receiving Sub-station:

21.6.1 Grid Connected Solar Power Plants commissioned under Clause 5.1.1, 5.1.2, 5.1.3, 5.1.5, 5.1.7 & 5.1.9:

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 Discoms per the prevailing orders of RERC.

21.6.2 Grid Connected Solar Power Plants commissioned under Clause 5.1.4, 5.1.6 & 5.1.8:

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.

22. Ινχεντιπες βψ της Στατε Γοπερνμεντ:

22.1 Exemption from Electricity Duty:

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

22.2 Grant of incentives available to industries:

Generation of electricity from Solar Power Plants shall be treated as eligible industry under the schemes administered by the Industries Department and incentives available to industrial units under such schemes shall be available to the Solar Power Producers.

22.3 Availability of Water for Power Generation:

22.3.1 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.

22.3.2 Power Producer will intimate estimated water requirement to RREC along with source of water. After assessment/scrutiny, case of water requirement shall be forwarded to the Water Resource department. The modifications(s) required, if any, in the existing canal system shall be done by the Water Resources Department at the cost of the Power Producer.

23. Sharing of Clean Development Mechanism:

The Solar Power Producer will pass benefits of CDM to the distribution licensee with whom PPA has been signed as per appropriate Commission's order.

24. The Completion Time schedule for the Projects:

24.1 The completion time schedule for the projects sanctioned under the MNRE generation based scheme (Clause 5.1.1) will be governed by the guidelines of the scheme issued by MNRE.

24.2 The completion time schedule for the Solar Power Plants sanctioned under migration scheme (Clause 5.1.2) of NSM will be governed by the guidelines issued by MNRE/NVVN.

24.3 The completion time schedule for the Solar Power Plants under the Clause 5.1.3, 5.1.5, 5.1.7(ii) & 5.1.9 will be governed by provision of bid document and Power Purchase Agreement.

24.4 The completion time schedule for the Solar Power Plants sanctioned under National Solar Mission {Clause 5.1.4 & 5.1.7(i)} will be as per guidelines issued by MNRE/NVVN/IREDA.

24.5 The time schedule for completion, for the Solar Power Plants, sanctioned under Clause 5.1.6 & 5.1.8 subject to force majeure conditions, will be as under:

Type of Projects	-	Completion Time schedule
SPV:		

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
<u>CSP:</u>		
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

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

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

Normally, SLEC will not grant any extension beyond 15 months, but SLEC may consider extension beyond 15 months where there is a reasonable certainty of commissioning of the project. In such cases, extended completion schedule & penalties shall be decided by SLEC on case-to-case basis.

25. Reactive Power Charges:

The drawl of reactive power shall be charged by RVPN as per the RERC order, as amended from time to time.

26. The Solar Power Producer shall comply with the Grid Code including Load Dispatch and System Operation Code, Metering Code, Protection Code, Safety Code etc. as applicable from time to time in the State of Rajasthan.

27. Power to remove difficulties:

The State Level Screening Committee will be authorized to issue clarification in respect of interpretation of the provisions of this policy as may appear necessary for removing the difficulty either on its own motion or on the written representation from the stakeholders.



28. Notwithstanding anything contained in this Policy, the provision of the Electricity Act 2003

And the applicable CERC/RERC Regulations /Orders as issued from time to time shall prevail for the purpose of implementation of this Policy.

(Naresh Pal Gangwar)

Secretary to Government

Energy Department

Copy to the following for information and necessary action:-

1. Secretary, Ministry of Power, Government of India, Shram Shakti Bhawan, Rafi Marg, New Delhi.
2. Secretary, Ministry of New & Renewable Energy, Government of India, New Delhi.
3. Chairman & MD, Raj. Rajya Vidyut Prasaran Nigam Ltd.
4. Chairman & MD, Raj. Renewable Energy Corp. Ltd.
5. CMD, Jaipur Vidyut Vitran Nigam Ltd. & Chairman, Discoms
6. MD, Ajmer/Jodhpur Vidyut Vitran Nigam Ltd
7. Director, Printing & Stationary, Govt. of Rajasthan with the request to get it published in extraordinary gazette of Rajasthan.
8. Guard file.

Secretary to Government

Annexure-I

From-A



RAJASTHAN RENEWABLE ENERGY CORPORATION LIMITED

(Government of Rajasthan Undertaking)

E-166, Yudhisthir Marg, C-Scheme, Jaipur

Tel: 2225859 / 2229341 / 2221650 / 2229055 Fax: 0141-2226028

Website: www.rrecl.com

**APPLICATION FORM FOR SUBMITTING PROPOSALS UNDER RAJASTHAN
SOLAR ENERGY POLICY, 2011**

I. COMPANY DETAILS

1. Name of the applicant / organization :
2. State whether the applicant /organization is a :
 - a) Company registered under Indian :
Companies Act 1956;
 - b) Co-operative Society; :
 - c) Any other corporate entity :
3. Address :
 - i. **Office** :
 - a) Telephone No. :
 - b) Fax No. :
 - c) Email Address :
- Name and Address of the authorized Person** :
 - a) Name :
 - b) Address :
 - c) Telephone No. :
 - d) Fax No. :
 - e) Email Address :
4. In case of any other corporate entity, give :
Details of partners / directors/ owners
5. Whether income tax assessee. If yes, please :
State the year up to which assessment made



(Copies of assessment for last three years to be Enclosed)

6. If answer to 5 is No, state whether the promoter is an assessee. :
7. Income tax permanent A/c. No. :
8. Present activity/business carried on by the Applicant/ organization. :
9. Give details of the turn over of the organization In last three years (copies of the profit and loss Account and Balance Sheet / Annual Report to Be enclosed). :
10. Do you propose to set up the plant in the name Of existing company or SPV or propose some Sister concern. :

ii. PROPOSED POWER PROJECT

1. (a) Proposed Gross Capacity (MW). :
(b) Auxiliary Consumption (MW) :
(c) Net Capacity (MW) :
(d) Plant Load Factor (PLF) % :
(e) Net expected power generation per : lacs kWh
Annum
2. (a) Location of proposed site with details. :
(b) Land details of the power plant site :
 - I. Name of village :
 - II. Khasra Nos. :
 - III. Area of land from each Khasra No. :
 - IV. Land map with clear markings of land Required for the project. :
 - V. Is it Govt. land or Pvt. Land :
3. Nearest Railway Station :
4. Name of the manufacturer with address for Supply, installation and commissioning of the Power generation system, if identified. :



5. Financing Arrangement: :
- a) Own funds (promoters) :
- b) IREDA/ PFC/REC/ Financial Institution /
Commercial Banks :
- c) Equity :
- d) Others :
6. Time frame and pert chart for major activities. :
- I. Acquisition of land:
- II. Signing of PPA :
- III. Expected financial closure :
- IV. Date of commissioning / synchronization :
- V. Proposed Commercial Operation Date :
(COD)
7. Power Plant proposed to be set up for
- a) Captive use :
- b) Sale of energy to RVPN/DISCOM :
- c) Third party sale at mutually agreeable rates on :
Payment of approved wheeling charges to
RVPN.
- d) Under National Solar Mission (please specify
The name of scheme under which the power
Plant proposed to be set up) :
- e) Any other (please specify) :

iii. DETAILS OF PROPOSED POWER PROJECTS

a) Solar Photovoltaic Power Plant (SPV)

- I. Name of Solar Technology Proposed :
- II. No. of Solar Modules proposed :
- III. Capacity of PCU :
- IV. Battery bank proposed : Yes/ No
- V. If yes, its capacity :
- VI. Duration and time of day during which
Supply of power is proposed :

b) SPV – Wind Hybrid



- I. No. of Solar Modules proposed :
- II. Capacity of PCU :
- III. Battery bank proposed : Yes/ No
- IV. If yes, its capacity :
- V. Duration and time of day during which :
- VI. Supply of power is proposed
- e) Solar Thermal**
- I. Name of Solar Technology Proposed :
- II. With storage/without storage :
- III. If, storage, total hours of storage :
- IV. Requirement of Water (Cusec.) :
- V. Duration and time of day during which
Supply of power is proposed :
- iv. ELECTRICAL DETAILS**
- 1. Transmission of Power & Evacuation :
Plan/interconnection facility for the
Proposed plan
- 2. Interfacing scheme proposed :
- 3. For captive power plant :
 - I. Present consumption of Electricity :
 - a) From Vidyut Vitaran Nigam :
 - b) Captive Generation :
 - II. Connected load of the company :
 - III. HT/LT consumer. :
 - IV. Nearest Sub-station of RVPN/Discom
And distance from the proposed power
Plant. :
 - V. Voltage ratio of the RVON/Discoms
Sub-station :
- v. FINANCIAL DETAILS**
- 1. Estimated cost of the project proposed :
- 2. Cost of power generation per unit (Please
Enclose Cash Flow Chart also). :Rs./kWh



3. How do you propose to raise the required Finance for the project :
- a) Equity share capital :
- b) Promoters contribution :
- c) Term Loans :
4. Do you envisage any foreign collaboration, if So please furnish the details :
5. Details of the application/processing fee Remitted: (as per clause 8.2) :
- a) Amount Rs. :
- b) Demand Draft/Cheque No. :
- c) Date :
- d) Banker's Name and Address :
6. Can you get / access bilateral grants/ Concessional loans from GoR to provide soft Loan for your project (if yes, give details of the Agency and preliminary terms and conditions) :

VI. ANY OTHER RELEVANT INFORMATION

VII. DECLARATION:

- I. I/We certify that all information furnished is true to the best of my/our knowledge.
- II. I/We agree that Govt. of Rajasthan is the final authority to allot us the project.
- III. I/We shall not have any dispute with GoR/RREC/NVVN for non-allotment of the project.
- IV. I/We agree to sign necessary agreement with Govt. of Rajasthan/RREC/NVVN/RVPN/DISCOM.
- V. I/We agree to comply with the terms and conditions of Rajasthan Solar Energy Policy, 2011

Signature of the authorized Signatory
of the Organization with Seal

Place:

Date:

VIII. DOCUMENTS ENCLOSED (as applicable):-

- i. A certified copy of the Memorandum & Article of Association of the Company.
- ii. Certified copy of the registration certificate.
- iii. Certified copy of the partnership deed.

- iv. Certified copy of the Authority conferring powers on the person(s) who are competent to execute the MOU/the agreement with GoR/RREC/RVPN/DISCOM/NVVN/IREDA.
- v. Pre feasibility Report/Detailed Project Report
- vi. Processing fee in the form of D.D. No. Dated Payable to RREC, Payable at Jaipur for Rs...
- vii. Annual Audited accounts of the Company for last three years and for the current year un-audited, if available.
- viii. Certificate from the Chartered Account showing the "Net Worth" of the Company.

ANNEXURE-II

The Power Producer desirous to set up Solar Power Plant in State of Rajasthan must fulfill the following minimum financial criteria and technical criteria.

A (I) - Qualification Criteria for Solar PV Projects:

Net Worth

The "Net Worth" of the company should be equal to or greater than the value calculated at the rate of Rs 3 Crore or equivalent US\$ per MW of the project capacity. The computation of Net Worth shall be based on unconsolidated audited annual accounts of the company. For the purpose of the computation of net worth, the best year in the last four years shall be considered. The Company, would thus be Required, to submit annual audited accounts for the last three financial years and current year (UnAudited) if available, while indicating the year, which should be considered for evaluation, along With a certificate from the Chartered Accountant to demonstrate the fulfillment of the criteria.

For companies, which are newly incorporated, the Net Worth criteria should be met seven days prior to the date of submission of application by the Project Developer. To demonstrate fulfillment of the criteria, the Project Developer shall submit a certificate from a Chartered Accountant certifying the Net Worth on the date seven days prior to submission of application. Further, the Project Developer shall submit the un-audited financial statements of the company for the date on which the Certificate of Chartered Accountant has been obtained.

{Note: For the Qualification Requirements, if data is provided by the Project Developer in foreign Currency, equivalent rupees of Net Worth will be calculated using bills selling exchange rates (card rate) USD/INR of State Bank of India prevailing on the date of closing of the accounts for the respective financial year as certified by the Project Developer's banker.

Guidelines for Selection of New grid connected Solar Power Projects

For currency other than USD, Project Developers shall convert such currency into USD as per the Exchange rates certified by their banker prevailing on the relevant date and used for such conversion. }

Net Worth

= Paid up share capital

Add: Reserves

Subtract: Revaluation Reserves

Subtract: Intangible Assets

Subtract: Miscellaneous Expenditures to the extent not written off and carry forward losses

For the purposes of meeting financial requirements only unconsolidated audited annual accounts shall be used. However, audited consolidated annual accounts of the Project Developer may be used for the Purpose of financial requirements provided the Project Developer has at least twenty six percent (26%) Equity in each company whose accounts are merged in the audited consolidated account and provided Further that the financial capability of such companies (of which accounts are being merged in the Consolidated accounts) shall not be considered.

In case of a Consortium the financial requirement to be met by each Member of the Consortium shall be computed in proportion to the equity commitment made by each of them in the Project Company. Supply of power to; incorporate a Project Company with equity participation by the Members before signing the PPA. The Project Developer may seek qualification on the basis of financial capability of its Parent Company and / or its Affiliate(s) for the purpose of meeting the Qualification Requirements. In case of the Project Developer being a Bidding Consortium, any Member may seek qualification on the basis of financial capability of its Parent Company and / or its Affiliate(s).

In case, any Company desirous to develop both Solar PV Project as well as Solar Thermal Project, the Company will have to meet the total Net Worth requirement for all the Projects selected and submit the proof for the same within one month from the date of application.

A (II) - Qualification Criteria for Solar Thermal Projects

Net Worth

The “Net Worth” of the company should be equal to or greater than the value calculated at the rate of Rs 3 Crore or equivalent US\$ per MW of the project capacity upto 20 MW. For every MW additional capacity, beyond 20 MW, additional net worth of Rs 2 crore would need to be demonstrated. The computation of Net Worth shall be based on unconsolidated audited annual accounts of the company. For the purpose of the computation of net worth, the best year in the

last four years shall be considered. The Company, would thus be required, to submit annual audited accounts for the last three financial years and current year (Un-Audited) if available., while indicating the year, which should be considered for evaluation, along with a certificate from the Chartered Accountant to demonstrate the fulfillment of the criteria.

For companies, which are newly incorporated, the Net Worth criteria should be met seven days prior to the date of submission of application by the Project developer. To demonstrate fulfillment of the Criteria, the Project Developer shall submit a certificate from a Chartered Accountant certifying the Net Worth on the date seven days prior to submission of application. Further, the Project Developer shall submit the un-audited financial statements of the company for the date on which the Certificate of Chartered Accountant has been obtained.

{Note: For the Qualification Requirements, if data is provided by the Project Developer in foreign currency, equivalent rupees of Net Worth will be calculated using bills selling exchange rates (card rate) USD / INR of State Bank of India prevailing on the date of closing of the accounts for the respective financial year as certified by the Project Developer's banker.

For currency other than USD, Project Developers shall convert such currency into USD as per the Exchange rates certified by their banker prevailing on the relevant date and used for such conversion.}

Net Worth

= Paid up share capital
Add: Reserves
Subtract: Revaluation Reserves
Subtract: Intangible Assets
Subtract: Miscellaneous Expenditures to the extent not written off and carry forward losses

For the purposes of meeting financial requirements, only unconsolidated audited annual accounts shall be used. However, audited consolidated annual accounts of the Project Developer may be used for the Purpose of financial requirements provided the Project Developer has at least twenty six percent (26%) Equity in each company whose accounts are merged in the audited consolidated account and provided Further that the financial capability of such companies (of which accounts are being merged in the Consolidated accounts) shall not be considered.

The financial requirement to be met by each Member of the Consortium shall be computed in Proportion to the equity commitment made by each of them in the Project Company. Any Consortium, if selected, shall, for the purpose of supply of power under these guidelines, incorporate a Project Company with equity participation by the Members before signing the PPA.

The Project Developer may seek qualification on the basis of financial capability of its Parent Company And / or it's Affiliate(s) for the purpose of meeting the Qualification Requirements. In case of the Project Developer being a Bidding Consortium, any Member may seek qualification on the basis of financial capability of its Parent Company and / or its Affiliate(s).

In case any Company is desirous to develop both Solar PV Project as well as Solar Thermal Project, the Company will have to meet the total Net Worth requirement for all the Projects selected and submit the proof for the same as per requirement.

B (I) -Technical Requirements of PV Module for use in Grid Solar Power Plants

The following are some of the technical measures required to ensure quality of the PV modules used in grid solar power projects.

a) PV Module Qualification

1.1 The PV modules used in the grid solar power projects must qualify to the latest edition of any of the following IEC PV module qualification test or equivalent BIS standards.

Crystalline Silicon Solar Cell Modules	IEC 61215
Thin Film Modules	IEC 61646
Concentrator PV modules	IEC 62108

1.2 In addition, PV modules must qualify to IEC 61730 for safety qualification testing. For the PV Modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC 61701.

b) Authorized Test Centers

The PV modules must be tested and approved by one of the IEC authorized test centers. In addition a PV module qualification test certificate as per IEC standard, issued by ETDC, Bangalore or Solar Energy Centre will also be valid.

MNRE will review the list of authorized testing laboratories/centers from time to time.

c) Warranty

- The mechanical structures, electrical works and overall workmanship of the grid solar power Plants must be warranted for a minimum of 5 years.
- PV modules used in grid solar power plants must be warranted for output wattage, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years.

d) Identification and Traceability

Each PV module used in any solar power project must use a RF identification tag. The following information must be mentioned in the RFID used on each module (This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions.)

- I. Name of the manufacturer of PV Module
- II. Name of the Manufacturer of Solar cells
- III. Month and year of the manufacture (separately for solar cells and module)
- IV. Country of origin (separately for solar cells and module)
- V. I-V curve for the module
- VI. Wattage, I_m , V_m and FF for the module
- VII. Unique Serial No and Model No of the module
- VIII. Date and year of obtaining IEC PV module qualification certificate
- IX. Name of the test lab issuing IEC certificate
- X. Other relevant information on traceability of solar cells and module as per ISO 9000

All grid solar PV power plants must install necessary equipment to continuously measure solar radiation, ambient temperature, wind speed and other weather parameters and simultaneously Measure the generation of DC power as well as AC power generated from the plant. They will be required to submit this data to the Ministry on line and/or through a report on regular basis for the entire duration of PPA.

B (II) -Technical Qualification Requirements for Eligibility of a Solar Thermal Power Developer to Establish Solar Power Plant

- a) Only new plant & machinery to be used.
- b) Any of the Concentrated Solar Power (CSP) technology, such as, Parabolic Trough Collectors, Solar Dish Sterling (or any other prime mover), Linear Fresnel Reflector, Central Tower with heliostats, or their any other combination could be used.
- c) Solar Power Developer must fulfill either of following requirements:
 - I. Solar Power Developer is himself a technology provider who has either experience in design and engineering of at least 1 (one) MW capacity solar thermal power plant having been in operation for a period of at least one year on the specified cut off date, or obtained at least one financial closure of a solar thermal power plant of at least 50% of the proposed capacity based on the proposed technology.
 - II. Solar power Developer has a tie-up with a technology provider fulfilling technology requirements at S. No. (i) Above.
 - III. Solar Power Developer is an EPC contractor/power generating company having experience in engineering, erection and commissioning of at least 100 MW capacity conventional thermal power plant and a tie-up with a technology provider fulfilling technology requirements at S. No. (i) Above.

- IV. Solar power Developer has a tie-up with an EPC contractor having experience in engineering, erection and commissioning of at least 100 MW capacity conventional thermal power plant and a tie-up with a technology provider fulfilling technology requirements at S. No. (i) Above.
- V. Solar Power Developer is an EPC contractor having experience in engineering, erection and commissioning of at least 1 (one) MW capacity solar thermal power plant and a tie-up with a technology provider fulfilling technology requirements at S. No. (i) Above.
- VI. Solar Power Developer has a tie up with an EPC contractor having experience in engineering, erection and commissioning of at least 1 (one) MW capacity solar thermal power plant and a tie-up with a technology provider fulfilling technology requirements at S. No. (i) Above.
- d) All grid connected solar thermal power plants will install equipment for regular monitoring of solar irradiance (including DNI), ambient air temperature, wind speed and other weather parameters and simultaneously for monitoring of the amount of electric power generated from the plant. They will submit this data to the RREC on line and/or through a report on regular basis for the entire duration of PPA.
- Note:** Tie up would mean any of (i) MOU for Technology Transfer, (ii) Technology or document sale agreement, (iii) EPC Contract, (iv) Project specific assurance to support with design and construction of the plant.
