

Policy
for
Grid Connected Rooftop
Solar Photovoltaic Power Plants-2016
(Net Metering Based)



Department of Science and Technology
Government of Jammu and Kashmir

Table of Contents

1.	Background.....	3
2.	Scope and Application.....	4
3.	Objectives.....	5
4.	Definitions.....	5
5.	Acronyms.....	6
6.	Eligibility.....	7
7.	Capacity Targets for distribution License.....	7
8.	Installed Capacity.....	7
9.	Net Metering.....	8
10.	Connectivity and Production.....	8
11.	Liability.....	8
12.	Technical and interconnection requirement &	
13.	Operation and Maintenance	9
14.	Banking Mechanism and Billing.....	9
15.	Subsidy.....	11
16.	Incentives for the Industries Sector.....	11
17.	Solar Rooftop Systems for Government Institutions.....	11
18.	Work Contract Tax.....	12
19.	Solar Renewable Purchase Obligations.....	12
20.	Applicability of other Charges.....	12
21.	Eligibility to participate under Renewable Energy Certificate Mechanism.....	12
22.	Application Fee.....	13
23.	Procedure.....	13
24.	Penalty.....	13
25.	Agreement.....	13
26.	Forms.....	13
27.	Power to Interpret, Relax and Amend.....	14

1. BACKGROUND:

- 1.1 Solar energy offers clean, environment-friendly, abundant and inexhaustible energy resource to mankind. The Ministry of New and Renewable Energy (MNRE) has designated Jammu and Kashmir Energy Development Agency (JAKEDA) as the nodal agency to undertake the solar rooftop programme in the State for the domestic, social, government, institutional and industrial & commercial sectors through Grid interconnectivity and sale of power to the State Utility (DISCOM) on Net Metering basis.
- 1.2 Under the Jawaharlal Nehru National Solar Mission, the Ministry of New and Renewable Energy, Government of India, (MNRE) has fixed a target of generating 1,00,000 MW of Grid Connected Solar Power out of which 40,000 MW has been exclusively set for Grid Connected Rooftop Solar Power Plants. An aggregate capacity of 450 MW of Rooftop Solar Power has also been targeted to be generated by the State of J&K by the year 2022.
- 1.3 The Government has already notified the J&K Solar Power Policy-2013 which, inter alia, provides for encouraging solar power generation to harness vast solar potential in the State and to promote large scale Grid Connected Solar Power Plants to achieve the collective targets set by the MNRE.
- 1.4 In pursuance of the issuance of final Regulations on Net metering for Grid Interactive Rooftop Solar PV Systems by Jammu and Kashmir State Electricity Regulatory Commission (JKSERC) and to achieve the targets set by the Ministry (MNRE) the Government of J&K (GoJK) notifies this Policy for Grid Interactive Roof-Top Solar Photo Voltaic Power Plants based on Net-Metering.

2. SCOPE AND APPLICATION:

- 2.1 This Policy shall remain applicable for a period of 10 years unless repealed or substituted with a new Policy, whichever is earlier.
- 2.2 The policy shall be implemented in accordance with the provisions of the *JKSERC (Grid Interactive Rooftop Solar Photovoltaic Systems based on Net Metering) Regulations, 2015*, as amended from time to time.
- 2.3 The policy shall take effect from the date of its notification in the official Gazette.

3. OBJECTIVES:

The State Government introduces this Policy with the following objectives:

- 3.1 To contribute to solar capacity addition and fulfillment of Solar targets set by the Ministry.
- 3.2 To optimally utilize the available solar energy resource in the State.
- 3.3 To encourage development and promotion of environment friendly solar energy generation contributing to sustainable development.
- 3.4 To enable stakeholders in reducing greenhouse gas emissions.
- 3.5 To attract private sector participation in solar energy sector.
- 3.6 To build favorable environment for setting up Grid Connected Rooftop Solar Photovoltaic Power Plants.
- 3.7 To enhance skills and create employment opportunities.
- 3.8 To contribute to productive utilization of available rooftop spaces.
- 3.9 To spread environmental awareness amongst the general public of J&K.

4. DEFINITIONS:

Words and expressions used in this policy but not defined shall have the same meaning as assigned to them respectively in JKSERC (Grid Interactive Rooftop Solar Photovoltaic Systems based on Net Metering) Regulations, 2015.

5. ACRONYMS:

Following expressions used in the Policy would have meanings assigned to them as defined hereunder and as defined in the Solar Policy-2013, as amended from time to time.

- i. J&K : Jammu & Kashmir
- ii. MNRE : Ministry of New and Renewable Energy
- iii. JAKEDA : Jammu & Kashmir Energy Development Agency
- iv. DISCOM : Power Development Department, J&K
- v. JKSERC : Jammu & Kashmir State Electricity Regulatory Commission

- vi. kWp : Kilo watt peak
- vii. GoJK : Government of Jammu and Kashmir
- viii. JNNSM : Jawaharlal Nehru National Solar Mission
- ix. SPPs : Solar Power Plants
- x. PV : Photovoltaic
- xi. AC : Alternating Current
- xii. O&M : Operation and Maintenance
- xiii. MMC : Monthly Minimum Charges
- xiv. RPO : Renewal Purchase Obligation

6. ELIGIBILITY:

- 6.1 All the consumers of the State Distribution Licensee who intend to generate solar energy and set up solar PV plants on available roof-tops of Individual households, Industries, Government or Semi-Government or Local Body offices, Commercial establishments, Institutions, Residential complexes, either on their own (self-owned) or through the third party owned Rooftop PV Net Metering Model, shall be eligible with project capacity ranging from minimum 1kWp upto 1000 kWp (AC side) with or without battery back-up support. Consumers may generate solar power for self-consumption and may feed excess power into the grid.
- 6.2 An eligible consumer can select either his/her own or the third party owned Rooftop PV system subject to guidelines issued by the JKSERC. In the third party owned Rooftop PV Net Metering model, the developers or intermediaries can lease out solar PV systems to the interested rooftop owners. This can be a popular model for residential home owner, where turnkey installers lease Rooftop Systems to individual owners who, in turn, pay them a monthly lease rental. The owner of the house shall provide the rooftop and engage a turnkey installer to design and install the system. Alternatively, the installers can also offer an integrated service of leasing, commissioning and maintaining the systems to owners and guaranteeing standards of performance. The electricity generated from such a system shall be used to meet the rooftop owner's internal electricity needs while the excess generation shall be fed into the grid on net metering basis.
- 6.3 Notwithstanding the provisions of this policy, the State Government Departments can undertake rooftop solar projects above 1000 kW Peak (kWp) capacity through alternative mechanisms.

7. CAPACITY TARGETS FOR DISTRIBUTION LICENSEE:

- 7.1 Maximum cumulative capacity to be installed under this Policy shall be decided by the Government for two years and progress shall be reviewed on yearly basis. The shortfall in any year shall be carried forward to the next succeeding year provided that the cumulative capacity to be allowed at a particular distribution transformer shall not exceed the percentage of the rated capacity of the distribution transformer as specified in the JKSERC Regulations from time to time; on first-come-first serve basis. The applications not considered will lapse and consumer will have to apply afresh after the end of two years from the date of sanction for installation of rooftop solar power plants. However, consumers who want to utilize the energy generated from the Rooftop Solar Power Plants can use it for their captive use pending the net metering apparatus/ infrastructure being put in place by the Licensee DISCOM. After the installation of the net metering apparatus/infrastructure energy export would be allowed.
- 7.2 The Distribution Licensee shall update distribution transformer level capacity available for connecting rooftop solar systems under net metering arrangement on 1st April every year and shall provide the information on its website as well as to the Commission and JAKEDA by 30th of April.

8. INSTALLED CAPACITY:

The maximum capacity of the Roof Top Solar PV System, as mentioned on AC side at the output of inverter based on rated inverter capacity, shall not be more than the specified percentage of the Sanctioned Load of the consumer as per the JKSERC Net-Metering Regulations, provided that the minimum capacity shall not be less than 1 kWp and the maximum not more than 1000 kWp (for KVA conversion to KW use a power factor of 0.9). Eligible Consumers shall

assess their rooftop solar PV plant capacity based on the shadow less clear roof top area or vacant spaces or Sanctioned Load or Actual Annual Energy Consumption pattern and the capacity of Distribution Transformer.

9. NET- METERING:

- 9.1 The distribution licensee shall allow non-discriminatory net-metering arrangement with latest and approved equipment/apparatus on first-come-first serve basis for both self-owned and third party owned Rooftop PV Systems as long as the total capacity (in kWp) does not exceed the target capacity determined.
- 9.2. The distribution licensee shall accept the Solar PV Power as per the useful life of the SPV system or for a maximum period of 25 years which is the expected life of the system at present.

10. CONNECTIVITY AND PROTECTION:

The interconnection of the Rooftop PV Solar Power Plant with the network of the distribution licensee shall be made as per the technical specifications and standards for connectivity provided in the JKSERC Regulations for Net-Metering 2015, as amended from time to time.

11. LIABILITY:

The consumer/manufacturer/system integrator shall be solely responsible for any accident to human being/animals, whatsoever, (fatal/nonfatal) that may occur due to back feeding from the Solar Plant when the Grid supply is off. The Distribution Licensee reserves the right to disconnect the consumer's installation at any time in the event of such exigencies to prevent accident or damage to men and material.

**12. TECHNICAL AND INTERCONNECTION REQUIREMENTS:
&
13. OPERATION AND MAINTENANCE:**

The GoJK would separately notify the technical & interconnection requirements and O&M standards of the grid connected solar rooftop power plants, as per the provisions of the JKSERC, as amended from time to time. The said requirements and standards shall be available on the website of the concerned Department for the benefit of the stakeholders

14. BANKING MECHANISM AND BILLING:

14.1 On commissioning of the Solar Rooftop System and at the end of each of the billing cycle/settlement period, Distribution Licensee shall take energy meter readings for import or drawl and export or injection of power and work out the net energy flow quantum from or to the consumer. In case the net flow is towards the Utility Network i.e. the consumer has injected/exported the net surplus energy to the Distribution Licensee systems, such quantum will be treated as energy banked by the consumer with Distribution Licensee in the current billing cycle. In such scenario, the consumer will be issued Energy Account Statement along with the bill for charges like MMC, service charges etc., and banked energy will be carried forward for accounting in the next billing cycle. If the net energy flow is from the Distribution Licensee Network, then the consumer will be issued the Energy Account Statement and Energy Bill for the net power drawn in the billing cycle plus other charges.

14.2 The Energy Account Statement to be issued to consumer by Distribution Licensee for each billing cycle shall show quantum of export/ injected energy from Rooftop Solar PV System, Import/drawl of energy from Distribution Licensee in the billing period, banked energy of the previous billing cycle, net billed energy for payment by

the consumer for that billing period or net banked energy carried forward to the next billing period separately. The Energy Bill for import will be prepared as per the retail supply tariff as approved by the JKSERC for the category to which the consumer belongs. The energy exported to Distribution Licensee from the Rooftop Solar PV system shall be set-off against the energy imported from the Utility grid at the JKSERC approved retail supply tariff applicable to the particular consumer category.

- 14.3 At the end of the next and subsequent billing cycles / end of settlement period, Distribution Licensee will take the energy meter reading and work out the net flow taking into consideration the energy banked in the previous billing cycle if any, along with the readings of import and export of power for current billing cycle and work out the net energy account bill, as the case may be. The Procedure will be repeated at the end of every billing cycle. The settlement of net energy including any banked energy shall be done at the end of each settlement period. At the beginning of each settlement period, cumulative carried over injected energy shall be reset to zero.
- 14.4 All Rules and regulations including tariff shall be governed by the orders of JKSERC and terms and conditions prescribed in Application & Agreement (A&A) form.
- 14.5 All the instructions, rules and regulations applicable to the consumers of the Distribution Licensee for the applicable class/category including but not limited to the Tariff rates, Payment Schedule, Late payment surcharge, Connected load/Contract demand, Load Surcharge, Peak load restriction, Advance Consumption Deposit etc., shall also be applicable to the Roof Top Solar plant owner as a consumer of Distribution Licensee. Electricity duty shall be levied as per Government of J&K instructions amended from time to time.

As long as the consumer having set-up the solar power plant consumes power from Utility Grid and/or generated from solar plant or banked solar energy up to or more than the Monthly Minimum Charges (MMC) level in any billing period, MMC may not be leviable.

15. SUBSIDY:

- 15.1 The consumers interested in setting up of Solar Rooftop PV Project either on their own or through the third party owned Rooftop PV Net Metering Model shall approach Department of Science & Technology, Government of J&K for grant of applicable subsidy from MNRE, GoI and the State Government as per the prevailing instructions/Policy.
- 15.2 The Solar Power Plant will be eligible for the fiscal and other incentives as per J&K Solar Power Policy- 2013, as amended from time to time.

16. INCENTIVES FOR THE INDUSTRIES SECTOR:

The subsidy/incentives provided by the Central & State Government for installation of Grid Connected Rooftop SPV systems, from time to time shall be applicable to the new MSMEs/Start-Ups and SSI units in the State to meet the energy requirements and augment the “Green Initiatives” as envisaged under the Industrial Policy-2016, as amended from time to time. However, validity of such incentives shall be subject to the guidelines of the Industrial Policy.

17. SOLAR ROOFTOP SYSTEMS FOR GOVERNMENT INSTITUTIONS:

All Government Departments/Institutions shall encourage installation of Solar Rooftop Systems for their buildings/premises subject to feasibility of the site.

18. WORKS CONTRACT TAX:

The Works Contract Tax would be applicable on all contracts for installation and commissioning of Solar Power Plants as specified by the J&K Government, from time to time. The equipment for the solar rooftop power plant as a unit would be exempted from the Works Contract Tax. However, installation charges would be taxable.

19. SOLAR RENEWABLE PURCHASE OBLIGATION:

The quantum of electricity consumed by the eligible consumer, who is not defined as obligated entity, from the rooftop solar system under net metering arrangement shall qualify towards compliance of Renewable Purchase Obligation (RPO) for the Distribution Licensee as per the clause 14 of the Net Metering Regulations issued by JKSERC as amended from time to time.

20. APPLICABILITY OF OTHER CHARGES:

The Rooftop Solar System under Net-metering arrangement, whether self-owned or third party owned shall be exempted from banking and wheeling charges, losses, cross subsidy and additional surcharge etc. However the Monthly Minimum Charges (MMC) shall be applicable on the total consumption of the consumer of each billing cycle and not on the net consumption as per the provisions of JKSERC as amended from time to time.

21. ELIGIBILITY TO PARTICIPATE UNDER RENEWABLE ENERGY CERTIFICATE MECHANISM:

The issuance of renewable energy certificate shall be as per the eligibility criteria specified under Central Electricity Regulatory

Commission (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 as amended from time to time.

22. APPLICATION FEE:

The applicant shall pay an application fee of Rs.100 per kWp subject to a maximum of Rs.10000/- along with the application to the Distribution Licensee.

23. PROCEDURE:

All the timelines that will govern the procedure for deploying the Rooftop based Solar Power Plants in the premises of the bonafide consumers, of all categories, shall be in accordance with the timelines defined in the JKSERC Regulations for net metering, 2015 as amended from time to time.

24. PENALTY:

In case of failure to meet the requirements for net metering system, the solar power generator shall be liable to pay penalty as decided by the JKSERC from time to time.

25. AGREEMENT:

For Grid Connectivity, the Eligible Consumers and the Distribution Licensee shall enter into an agreement in the form and manner as devised by the Government.

26. FORMS:

The Science and Technology Department shall, from time to time, notify Application Forms for Grid Connected Solar Rooftop power plants and other documents and conditions required for making such applications.

27. POWER TO INTERPRET, RELAX AND AMEND:

The Government shall be the final authority to interpret any provision or remove any difficulty in implementation of this policy, on the recommendations of an Empowered Committee headed by the Chief Secretary and comprising the following members, by general or special order. The Government can relax any of the provisions of this Policy and from time to time add, vary, alter, suspend, modify, amend or repeal any provision of this Policy on the recommendations of the Empowered Committee:

1.	Chief Secretary, J&K	Chairman
2.	Administrative Secretary, Planning & Development Department	Member
3.	Administrative Secretary, Power Development Department	Member
4.	Administrative Secretary, Finance Department	Member
5.	Administrative Secretary, Industries and Commerce Department	Member
6.	Administrative Secretary, Housing and Urban Development Department	Member
7.	Administrative Secretary, Science & Technology Department	Member Secretary
8.	CEO, JAKEDA	Member