

## GOVERNMENT OF PUNJAB

### Policy on Net Metering for Grid Interactive Roof-Top Solar Photo Voltaic Power Plants Dated 05<sup>th</sup> November, 2014

Sl. No.	Description	Summary
1.	<b>Order</b>	Notification No. 18/7/2014-PE1/3706 dated 5 <sup>th</sup> Nov, 2014
2.	<b>Title</b>	Policy on Net Metering for Grid Interactive Roof-Top Solar Photo Voltaic Power Plants
3.	<b>Operative Period</b>	From date of Notification in the official gazette till Govt. issues New Policy and shall remain applicable unless repealed or substituted with new Policy
4.	<b>Scope and application</b>	<ul style="list-style-type: none"> <li>• Policy shall apply to the distribution licensee/consumers of distribution licensee of the State of Punjab.</li> <li>• Eligible consumer may install the rooftop solar system under net metering arrangement which;               <ul style="list-style-type: none"> <li>- Shall be within the permissible rated capacity as defined under this Policy.</li> <li>- Shall be located in the consumer premises.</li> <li>- Shall interconnect and operate safely in parallel with the distribution licensee network.</li> <li>- Notwithstanding the provisions of the Policy, State authorities have the right to undertake rooftop solar projects above 1 Mega Watt Peak (MWp) capacity through alternative mechanisms.</li> <li>- Provisions of NRSE Policy 2012 shall also apply to solar power plants under this Policy.</li> </ul> </li> </ul>
5.	<b>Eligibility</b>	<ul style="list-style-type: none"> <li>• All consumers of State Distribution licensee/PSPCL who set up solar PV plants at on roof-tops of Individual households, industries, Government or Semi-Government or Local Body offices, commercial establishments, institutions, residential complexes</li> <li>• Project capacity to be 1 KWp upto 1 MWp (AC side) with or without battery back-up support.</li> <li>• Consumers may generate solar power for self consumption and may feed excess power into the grid</li> </ul>
6.	<b>Third party owned Rooftop PV net metering model</b>	<ul style="list-style-type: none"> <li>• In this model, the developers or intermediaries lease out solar PV systems to interested rooftop owners</li> <li>• Electricity generated to meet the rooftop owner's internal electricity needs and the excess generation fed into the grid on net metering basis</li> <li>• PSPCL to deal with the rooftop owner/Consumer only and arrangement between rooftop owner and developer shall be personal to them.</li> <li>• Such roof top solar system installations set up under this Policy exempted from open access regulations</li> </ul>
7.	<b>Net-metering</b>	<ul style="list-style-type: none"> <li>• Distribution licensee shall allow non- discriminatory net-metering arrangement on first-cum-first serve basis for both self and third party owned rooftop PV systems as long as the total capacity (in MW) does not exceed the target capacity determined</li> <li>• Licensee to accept the solar PV power for 25 years as per the useful life of the SPV system</li> </ul>
8.	<b>Capacity Targets for distribution licensee</b>	<ul style="list-style-type: none"> <li>• To be decided by Govt. of Punjab(GoP) on yearly basis</li> <li>• Cumulative capacity allowed at a particular distribution transformer shall not exceed 30% of the rated capacity of the distribution transformer on first-cum-first serve</li> <li>• Applications not considered will lapse and consumer to apply afresh in the next financial year</li> <li>• Licensee to update distribution transformer level capacity available for connecting rooftop solar systems under net metering arrangement on 1st October every year and provide the information on its website/Commission and PEDDA</li> </ul>

9.	<b>Installed Capacity</b>	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 80% of the Sanctioned Connected Load or Contract Demand of the consumer and the minimum capacity shall not be less than 1 KW
10.	<b>SPV Plant and Metering</b>	<ul style="list-style-type: none"> <li>• All the equipment associated with solar plant installation shall be brand new as per latest specified Indian/IEC standards</li> <li>• Bidirectional energy meter with CTs and PT, if required, having the feature of recording both the import and export of energy, besides other parameters shall be as per CEA metering regulations/State Grid code as applicable</li> <li>• Make &amp; specifications as approved by PSPCL shall be installed at the cost of the SPV plant owner at the point where interconnection is made between Consumer system and PSPCL system.</li> <li>• Plant owner may install the meter and metering equipment procured by PSPCL or procure from vendors approved by PSPCL</li> <li>• If metering system is procured by Plant owner, then the testing and installation of meters including CTs and PT shall be got carried out from PSPCL and no meter rentals shall be charged</li> <li>• PSPCL shall seal the tested bidirectional energy meters as per prevailing practice of PSPCL.</li> <li>• Details of Energy Meters is given at <b>Annexure-I of the policy</b></li> </ul>
11.	<b>Connectivity and Protection</b>	<ul style="list-style-type: none"> <li>• Solar PV rooftop systems allowed in house auto synchronization or de synchronization facility with distribution system of the licensee at generation voltage level.</li> <li>• It will utilize the same service line for excess power injection into the Grid which is currently being used by the consumer for drawl of power from utility network and shall operate in synchronization with PSPCL system</li> <li>• Injection of power from system shall not be more than 90% of the total consumption from the licensee's supply by the consumer in a Settlement Period.</li> <li>• It shall be mandatory for the solar rooftop generator to provide an appropriate protection system on their incoming side or consumer premises with the feature of "Islanding the SPV generator", so as to achieve isolation of consumer power-system from utility power-system during grid failure including protection from voltage / lightning surges.</li> <li>• Power Conditioning Unit of the SPV plant shall have features to filter out harmonics and other distortions before injecting the energy into PSPCL system.</li> <li>• The harmonics and inverter standards are given at <b>Annexure-II and III</b> of the policy</li> </ul>
12.	<b>Solar Renewable Purchase Obligation(RPO)</b>	Quantum of electricity consumed by eligible consumer, who is not defined as obligated entity, from the rooftop solar system under net metering arrangement shall qualify towards compliance of RPO for the distribution licensee
13.	<b>Applicability of other charges</b>	<ul style="list-style-type: none"> <li>• Exempted from banking and wheeling charges and losses, cross subsidy and additional surcharge etc</li> <li>• Monthly Minimum Charges (MMC) shall be applicable</li> </ul>
14.	<b>Eligibility to Participate under Renewable Energy Certificate Mechanism(REC)</b>	Issuance of REC to 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
15.	<b>Banking mechanism and Billing</b>	<ul style="list-style-type: none"> <li>• PSPCL to take energy meter readings for import/export of net energy flow quantum from or to the consumer.</li> <li>• In case of export, the net surplus energy to be treated as energy banked by the consumer with PSPCL</li> <li>• Energy Bill for import to be as per the retail supply tariff as approved by the PSERC for the category to which the consumer belongs.</li> <li>• Energy export to be set-off against the energy imported from the PSPCL grid at the PSERC approved retail supply tariff applicable to the particular consumer category.</li> </ul>

		<ul style="list-style-type: none"> <li>All Rules and regulations including tariff shall be governed by the orders of PSERC and terms and conditions prescribed in Application &amp; Agreement (A&amp;A) form.</li> <li>An additional form or MOU shall be signed between the licensee and seller of such roof-top Solar PV sources and shall become the part of A&amp;A Form.</li> <li>All the instructions, rules and regulations applicable to the consumers of the PSPCL shall also be applicable to the Roof Top Solar plant owner as a consumer of PSPCL.</li> <li>Electricity duty(ED) shall be levied as per GOP instructions and at present ED is applicable on the net power drawn by the Consumer from PSPCL.</li> <li>As long as the consumer consumes power from PSPCL and/generate from solar plant/banked solar energy up to or more than the MMC level in any billing period, Monthly Minimum Charges (MMC) shall not be leviable.</li> </ul>
16.	<b>Procedure</b>	<ul style="list-style-type: none"> <li>Consumer can download the solar net-metering rooftop Application-cum-Agreement form from the website of the PSPCL and submit the same to designated officer of PSPCL for grant of permission to set-up the plant.</li> <li>Applicant to be issued Letter of Approval by PSPCL within 30 days of receipt of application.</li> <li>Consumer to set up the plant and submit the work completion report along with Single Line Diagram of the synchronizing and protection arrangement issued by the plant supplier/EPC contractor that the plant has been installed as per approved standards and specifications within 180 days.</li> <li>After site verification, PSPCL shall install and seal the Bi-directional energy meter(s) within 10 days of the submission of report and plant will be treated as commissioned for net-metering commercial operations from that date.</li> <li>In case of delay the consumer to get extension from PSPCL for a maximum period of 2-months</li> <li>Approval will lapse automatically if the project is not set-up even in the extended 2-months period</li> <li>Consumer to be eligible to apply in the next financial year</li> </ul>
17.	<b>Restrictions on level of overall or local grid penetration</b>	<ul style="list-style-type: none"> <li>Distribution licensee to provide net metering arrangement to all eligible consumers as long as the cumulative capacity to be allowed for a particular distribution transformer shall not exceed 30% of the rated capacity of the distribution transformer.</li> <li>Distribution utility to which the - consumer is connected can be given the benefit of deemed RPO for self-consumption of electricity by consumers who are not defined as obligated entities under the RPO as long as such consumers do not opt for REC framework for self consumption as eligible entity</li> </ul>
18.	<b>Application Fee</b>	Rs. 50/KVA along with the application to PSPCL
19.	<b>Technical and inter-connection requirements</b>	Detailed in Annexure-IV of the Policy
20.	<b>Operation and Maintenance</b>	<ul style="list-style-type: none"> <li>The solar plant shall comply with the relevant standards specified by the MNRE/ BIS and CEA.</li> <li>The responsibility of operation and maintenance of the solar photo voltaic (SPV) generator including all accessories and apparatus lies with the consumer.</li> <li>Automatic isolation or islanding protection of SPV should be ensured for, no grid supply and low or over voltage conditions and within the required response time.</li> <li><b>For more details may please refer the policy</b></li> </ul>
21.	<b>Applicability of REC and RPO</b>	<ul style="list-style-type: none"> <li>Net-metering injection is not eligible for REC.</li> <li>The quantum of electricity consumed by consumer, who is not defined as an obligated entity from the rooftop solar system under net-metering arrangement shall qualify as deemed RPO for the distribution licensee</li> </ul>
22.	<b>Penalty/ Compensation</b>	In case of failure of net metering system, the provisions of penalty/compensation to be as per the provisions of the standard of performance regulations for distribution licensee.
23.	<b>Power to Interpret, Relax and Amend</b>	Vested with Secretary, New and Renewable Energy
24.	<b>Subsidy/incentive</b>	<ul style="list-style-type: none"> <li>Consumers may approach PEDA for grant of applicable MNRE grant as per the prevailing instructions/Policy.</li> <li>The solar power plant will be eligible for the fiscal and other incentives as per NRSE Policy 2012.</li> </ul>