

RAJASTHAN ELECTRICITY REGULATORY COMMISSION

**(Connectivity and Net Metering for Rooftop and Small Solar Grid Interactive Systems) Regulations, 2015, Dated: 26.02.2015 with amendment
Dated: March, 2019**

Sl. No.	Description	Summary												
1.	Control Period/Review Period	<ol style="list-style-type: none"> 1. These Regulations shall apply to the distribution licensee and consumers of the distribution licensee availing supply from it in its area of supply in the State of Rajasthan. 2. The Eligible Consumer may install the rooftop solar system under net metering arrangement which, <ul style="list-style-type: none"> • shall be within the permissible rated capacity as defined under these Regulations. • shall be located on the consumer premises. • shall interconnect and operate safely in parallel with the distribution licensee network. 3. These Regulations do not preclude the right of State Nodal Agency or Distribution Licensee of the State to undertake Rooftop PV Solar Power Plants of 1 MWp and above capacity through alternative mechanisms. 												
2.	Cumulative Capacity	<ul style="list-style-type: none"> • The cumulative capacity to be allowed at a particular distribution transformer shall not exceed 30% of the capacity of the distribution transformer. • The distribution licensee shall update distribution transformer level capacity available for connecting Rooftop PV Solar Power Plants under net metering arrangement on yearly basis and shall provide the information on its website as well as to the Commission. 												
3.	Eligible Consumer and Individual Project Capacity	<ol style="list-style-type: none"> 1. The maximum Rooftop PV Solar Power Plant capacity to be installed at any Eligible Consumer premises shall not be more than 80% of the sanctioned connected load/contract demand of the consumer. 2. The capacity of Rooftop PV Solar Power Plant to be installed at the Premises of any Eligible Consumer shall be more than 1 kWp minimum and shall not be more than 1 MWp (1000 kWp). 												
4.	Interconnection with the Grid	<ul style="list-style-type: none"> • 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 Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013, as amended from time to time. • The connectivity levels at which the Rooftop PV Solar Power Plants shall be connected with the grid are as specified below: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">S. No.</th> <th style="text-align: center;">Connected load of Eligible Consumer</th> <th style="text-align: center;">Connectivity level</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.</td> <td style="text-align: center;">Upto 5 kW</td> <td style="text-align: center;">240 V- single phase</td> </tr> <tr> <td style="text-align: center;">2.</td> <td style="text-align: center;">Above 5 kW and upto 18.65 kW</td> <td style="text-align: center;">415 V-Three phase</td> </tr> <tr> <td style="text-align: center;">3.</td> <td style="text-align: center;">Above 18.65 kW and upto 50 kW/kVA</td> <td style="text-align: center;">415 V-Three phase</td> </tr> </tbody> </table>	S. No.	Connected load of Eligible Consumer	Connectivity level	1.	Upto 5 kW	240 V- single phase	2.	Above 5 kW and upto 18.65 kW	415 V-Three phase	3.	Above 18.65 kW and upto 50 kW/kVA	415 V-Three phase
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		4.	Above 50 kW/kVA	HT/EHT level
		<ul style="list-style-type: none"> The above connectivity norms are applicable to all the solar power generators who seek connectivity with network of the distribution licensees. EHT/HT consumers may install solar power generators at LT/HT voltage and connect them to their LT/HT system. The tests as per EN 50160 and as per distribution licensee's standards shall be done to ensure the quality of power generated from the Solar PV systems. IEC-62116 shall be followed to test islanding prevention measure for grid connected photovoltaic inverters. Every time the Rooftop PV Solar Power Plant of the Eligible Consumer is synchronized to the electricity system, it shall not cause voltage fluctuation greater than $\pm 5\%$ at the point of inter connection. 		
5.	Protective Equipment	<p>The Rooftop PV Solar Power Plant operating in parallel with electricity system shall be equipped with the following protective functions to sense abnormal conditions on electricity system and cause the Rooftop PV Solar Power Plant to be automatically disconnected from the electricity system or to prevent the Rooftop PV Solar Power Plant from being connected to electricity system inappropriately:</p> <ul style="list-style-type: none"> Over and under voltage trip functions if voltage reaches above 110% or below 80% respectively with a clearing time upto two seconds; however, appropriate licensee may prescribe a narrower range of voltage for the purpose. Over and under frequency trip functions, if frequency reaches 50.5 Hz or below 47.5 Hz with a clearing time upto 0.2 seconds; however, appropriate licensee may prescribe a narrower range of frequency for the purpose. Paralleling device of the Rooftop PV Solar Power Plant shall be capable of withstanding 220% of the nominal voltage at the interconnection point. 		
6.	Energy Accounting and Settlement	<ol style="list-style-type: none"> Meter readings shall be taken monthly or as per the billing cycle specified under the applicable Electricity Supply Code and Connected Meters Regulations. The electricity injected by a domestic category consumer exceeds the electricity consumed during the billing period, such excess injected electricity above 100 units shall be paid by the Distribution Licensee at Rs 3.14/unit where a capping of average generation of 4.8 units per kW of the approved installed capacity per day of the rooftop solar PV system shall be applicable. For domestic category, the net energy credits less than 100 units under Net Metering achieved in the particular billing period shall be adjusted in the next billing period till credit of 100 units is achieved. In case of consumers, other than domestic category, the capping of 4.8 units per kW of the approved installed capacity per day shall also be applicable and the net surplus electricity remaining available at the end of the billing period of the respective category shall lapse and no payment shall be made for the same. 		
7.	Solar Renewable Purchase Obligation	<p>The quantum of electricity generated from the Rooftop PV Solar Power Plant under net metering arrangement by an Eligible Consumer, who is not defined as obligated entity, shall qualify towards compliance of Renewable Purchase Obligation (RPO) for the distribution licensee in whose area of the supply the Eligible Consumer is located.</p>		
8.	Applicability of other charges	<p>The Rooftop PV Solar Power Plant under net metering arrangement, whether self-owned or third party owned installed on Eligible Consumer premises, shall be exempted from banking and wheeling charges and cross subsidy surcharge.</p>		
9.	Metering Arrangement	<ol style="list-style-type: none"> The bi-directional (net meter) shall be installed at the interconnection point of the Eligible Consumer with the network of the distribution licensee. 		

		<ol style="list-style-type: none"> 2. For the existing consumers, the consumer meter shall be replaced with the bi-directional/ net meter. 3. Solar meter shall be installed at the solar facility after the inverter to measure the solar generation. 4. These meters shall have the facility for downloading meter readings using Meter Reading Instrument (MRI). Check meters shall be mandatory for rooftop solar systems having capacity more than 250 kW. For installations size of less than and equal to 250 kW, the solar check meters would be optional. 5. The technical standards for meters shall be as per the standards specified by CEA from time to time.
10.	Communication Facilities	The meters installed for Rooftop PV Solar Power Plants with capacity above 250 kWp shall have the communication port for exchanging real time information with Distribution Licensee.
11.	Sharing of CDM Benefits	The CDM benefits arising from solar energy generation from the roof top PV facility shall be retained by Distribution Licensee.
12.	Penalty	In case of failure to meet the requirements under these regulations for net metering, the solar power generator shall be liable to pay penalty as decided by the Commission from time to time.