

GUJARAT ELECTRICITY REGULATORY COMMISSION

Draft Regulations for Net Metering Rooftop Solar PV Grid Interactive Systems 2016. – Dated 1st February-2016

Sl. No.	Description	Summary
1.	Short Title and Commencement	<ul style="list-style-type: none"> • Gujarat Electricity Regulatory Commission (Net Metering Rooftop Solar PV Grid Interactive Systems) Regulations- 2016, Dated 1st February 2016 • Regulations to come into force from the date of its notification in the Official Gazette.
2.	Definitions	As per Regulations.
3.	Applicability	<ul style="list-style-type: none"> • Apply to the distribution licensee and consumers of electricity of distribution licensee availing supply from it in its area of supply in the State of Gujarat, or consumers who are receiving electricity from its own generating source/third party but situated in the distribution licensee area. • Eligible Consumer may install the Rooftop Solar PV System under net metering arrangement which, <ul style="list-style-type: none"> (a) Shall be within the permissible rated capacity as defined under these Regulations. (b) Located in the consumer's premises. (c) Shall interconnect and operate safely in parallel with the distribution licensee network. • These Regulations do not preclude the right of relevant Distribution licensee or State Government Department/authorities to undertake Rooftop Solar PV projects above 1 MWp capacity through alternative mechanisms.
4.	General Principles	<ul style="list-style-type: none"> • Distribution licensee to provide the net metering arrangement to the consumer, who intends to install grid connected Rooftop Solar PV System, in its area of supply on non-discriminatory and first come first served basis. • Consumer is eligible to install the grid connected Rooftop Solar PV System of the rated capacity as specified under the Regulations; • Interconnection of system with the grid to be as per Central Electricity Authority Regulations, 2011 as amended time to time.
5.	Capacity Targets for Distribution Licensee	<ul style="list-style-type: none"> • The cumulative capacity to be allowed at a particular distribution transformer shall not exceed 30% of the peak capacity of the distribution transformer • Distribution licensee to update distribution transformer capacity available for connecting Rooftop Solar PV Systems under net metering arrangement on yearly basis and shall provide the information to the Commission • If augmentation of transformer/distribution network is required, the cost of augmentation to be borne by the consumer as provided in the GERC (Licensee's Power to Recovery of Expenditure incurred in providing supply and other miscellaneous Charges) Regulations, 2005 as amended from time to time • The capacity of Rooftop Solar PV System to be installed at the premises of any consumer shall not be less than one Kilo Watt peak (1 kWp).

6.	Eligible Consumer and individual project capacity	<p>(i) In addition to the general eligibility defined in Regulation 2 the Eligible Consumer for the Rooftop Solar PV System with net metering shall:</p> <ul style="list-style-type: none"> (a) be a consumer of the local distribution licensee; (b) own or be in legal possession of the premises including the rooftop/ terrace/ elevated areas on land, building or infrastructure or part or combination thereof on which the Solar PV System is proposed to be installed; (c) connect the proposed Rooftop Solar PV System to the Distribution System of the Licensee; (d) Consumes all the electricity generated from the Rooftop Solar PV System at the same premises. If the consumer is not able to consume all electricity in the same premises, he shall be governed by Regulation 9 of these regulations. <p>(ii) Maximum Rooftop Solar PV System capacity to be installed at any Eligible Consumer's premises shall be as under:</p> <ul style="list-style-type: none"> (a) For Residential and Government consumers: up to a maximum of 50% of consumer's sanctioned load; (b) For Industrial, Commercial and Other Consumers: up to a maximum of 50% of the sanctioned load/contract demand of the consumer. <p>Provided that the installed capacity shall not be less than 1 kWp and shall not exceed 1 MWp;</p>															
7.	Procedure for Application	<p>(i) Eligible Consumer who proposes to install a Rooftop Solar PV System in his premises to submit an application to the distribution licensee in the prescribed format along with necessary documents and the applicable fees as per Annexure – II and Annexure – III appended with the Regulations. The distribution licensee shall place such application form and necessary documents on its website as downloadable as well as make it available at its sub division offices.</p> <p>(ii) Consumer intending to set up Rooftop Solar PV System shall pay the connectivity charges to the licensee as stated in the Annexure-IV, appended with the Regulations.</p> <p>For more Details refer Regulations</p>															
8.	Interconnection with the Grid: Standards and Safety	<p>(i) Interconnection of the Rooftop Solar PV System with the network of the distribution licensee to be made as per CEA (Technical Standards for Connectivity to the Grid) Regulations, 2007 & (Measures relating to Safety and Electric Supply) Regulations, 2010 as amended. A variation in the rated capacity of the system within a range of (5%) shall be allowed;</p> <p>(ii) The connectivity levels at which the Rooftop PV Solar System shall be connected with the grid are as specified below:</p> <table border="1" data-bbox="602 1262 1333 1514"> <thead> <tr> <th>Sl. No.</th> <th>Connected load of Eligible Consumer</th> <th>Connectivity level</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Up to 5 kW</td> <td>240 V- single phase</td> </tr> <tr> <td>2.</td> <td>Above 5 kW and up to 18.65 kW</td> <td>415 V-Three phase</td> </tr> <tr> <td>3.</td> <td>Above 18.65 kW and up to 100 kW / kVA</td> <td>415 V-Three phase</td> </tr> <tr> <td>4.</td> <td>Above 100 kW / kVA</td> <td>HT / EHT level</td> </tr> </tbody> </table> <p>(iii) EHT/HT consumers may install Rooftop Solar PV System at LT/HT voltage and connect them to their LT/HT system for interconnection of Rooftop Solar PV System with the local distribution licensee's grid, as per the relevant provisions of CEA (Measures relating to Safety and Electric Supply) Regulations, 2010 as amended and GERC (Terms and Conditions of Intra-State Open Access) Regulations, 2011 as amended from time to time</p> <p>(iv) Generator to be responsible for safe operation, maintenance and rectification of defect of its system up to the interconnection point beyond which the responsibility including the net meter rest with the distribution licensee.</p>	Sl. No.	Connected load of Eligible Consumer	Connectivity level	1.	Up to 5 kW	240 V- single phase	2.	Above 5 kW and up to 18.65 kW	415 V-Three phase	3.	Above 18.65 kW and up to 100 kW / kVA	415 V-Three phase	4.	Above 100 kW / kVA	HT / EHT level
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8.		<p>(v) The consumer/ Rooftop Solar PV Energy Generator shall be solely responsible for any accident to human being/ animals whatsoever that may occur due to back feeding from the Rooftop Solar PV System 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 man and material.</p> <p>(vi) Tests as per EN 50160 and distribution licensee's standards shall be done to ensure the quality of power generated from the Rooftop Solar PV Systems.</p> <p>(vii) Any alternate source of supply to be restricted to the consumer's network and consumer to be responsible to take adequate safety measures to prevent battery power/diesel generator power/ back-up power extending to distribution licensee's LT grid on failure of distribution licensee's grid supply.</p> <p>(viii) The distribution licensee shall have the right to disconnect the Rooftop Solar PV System from its system at any time in the following conditions:</p> <ol style="list-style-type: none"> Emergencies or maintenance requirement on the distribution licensee's electric system, Hazardous conditions existing on the distribution licensee's system due to operation of Rooftop Solar PV System or protective equipment as determined by the Distribution Licensee/Transmission Licensee/SLDC, and Adverse electrical effects, such as power quality problems, on the electrical equipment of other consumers of the distribution licensee caused by the Rooftop Solar PV System as determined by the distribution licensee. <p>(ix) Subject to sub regulation v. above, licensee may call upon the Rooftop Solar PV generator to rectify the defect within two days of such intimation.</p> <p>(x) Rooftop Solar PV System to be capable of detecting an unintended islanding condition and have anti-islanding protection to prevent any unfavorable conditions including failure of supply. IEC-62116 shall be followed to test islanding prevention measure for grid connected photovoltaic inverters.</p> <p>(xi) Every Rooftop Solar PV System shall be equipped with automatic synchronization device. System using inverter not required to have separate synchronization device, if the same is inherently built into the inverter.</p> <p>(xii) The Rooftop Solar PV System operating in parallel with electricity system shall be equipped with the protective functions to sense abnormal conditions on electricity system and cause the Rooftop Solar PV System to be automatically disconnected from the electricity system;</p> <p>(xii) Prior to synchronization of the Rooftop Solar PV System for the first time with the distribution system of the licensee the applicant and the licensee shall agree on the protection features and control diagrams.</p> <p>For more details refer Regulations</p>
9.	Energy Accounting and Settlement	As per Regulations
10.	Dispute Resolution	In case of any dispute pertaining to these Regulations and its interpretation, it shall be decided by the Gujarat Electricity Regulatory Commission by observing the prescribed procedure.
11.	Banking	Banking allowed within one billing cycle of the consumer.
12.	Solar Renewable Purchase Obligation(RPO)	<p>(i) The quantum of electricity consumed by the Eligible Consumer, who is not defined as an obligated entity, from the Rooftop Solar PV System under net-metering arrangement to qualify towards compliance of RPO for the distribution licensee and no REC to be issued. Industrial, Commercial and other than Residential and Government Consumers, utilizing both, 'energy attribute' as well as 'renewable attribute' of the generated solar energy, the solar energy generated and consumed by such consumers during the 15 minute time block to be credited towards meeting the consumer's RPO and no REC shall be issued for such generation.</p> <p>(ii) However, surplus energy, if any, exported during the 15 minute time block purchased by distribution licensee, to be credited towards meeting the Licensee's RPO and no REC shall be issued for such generation. Provided that if such consumers utilize the 'renewable attribute' to get Renewable Energy Certificate under the REC mechanism then entire solar energy generated in 15 time block shall be considered for issuing REC</p>

13.	Applicability of other Charges	Rooftop Solar PV System under net metering arrangement, whether self-owned or third party owned installed on the Eligible Consumer's premises, exempted from Transmission Charge, Transmission Loss, Wheeling Charge, Wheeling Loss, Cross Subsidy Surcharge and Additional Surcharge.
14.	Metering arrangement	<ul style="list-style-type: none"> (i) The metering system shall be as per the Central Electricity Authority (Installation & Operation of Meters) Regulations, 2006 as amended from time to time. (ii) Bi-directional meter of the same accuracy class as the consumer's meter existing before the commissioning of the Rooftop Solar PV System to be installed in replacement of existing meter. Such meters to be provided by the distribution licensee or consumer. If the meter is installed by the distribution licensee in that case, cost of the same shall be recovered from the consumer (iii) Industrial, Commercial and Other consumers utilizing both 'energy attribute' as well as 'renewable attribute' of the generated solar energy shall have to use ABT compliant meter. (iv) Meters to be Meter Reading Instrument (MRI) or wireless equipment compliant for recording meter readings. If bills are prepared on the basis of MRI downloads or if meter reading is taken on the basis of remote meter-reading and the consumer wishes to have a record of the reading taken, he shall be allowed so by the licensee. (v) Main Solar Meters shall be of 0.2s class accuracy and with facility for recording meter readings using Meter Reading Instrument (MRI) or wireless equipment. Check meters to be mandatory for Rooftop Solar PV Systems having capacity more than 20 kW and optional for less than or equal to 20 kW. The cost of new/ additional meter (s) shall be borne by the Consumer and meter tested, installed & owned by the distribution licensee. (vi) Meters to be inspected, verified for the accuracy and sealed by the distribution licensee in the presence of the representative of the consumer. (vii) In case the Eligible Consumer is under the ambit of time of day tariff, meters compliant of recording time of day consumption/generation shall be installed. (viii) The meter reading taken by the distribution licensee shall form the basis of commercial settlement.
15.	Sharing of CDM benefits	100% of the gross proceeds on account of CDM benefit to be retained by the Developer in the first year after the date of commercial operation of the generating station. In the second year, the share of the Distribution Licensees to be 10% which shall increase progressively by 10% every year till it reaches 50%, where after the proceeds to be shared in equally between the Developer and the Licensees.
16.	Demand Cut	No demand cut for the Residential and Government consumers. Industrial, Commercial and Other consumers to be exempted from demand cut up to 50% of the installed solar capacity, wherever technically feasible.
17.	Penalty or Compensation	In case of failure of net metering system, penalty or compensation shall be payable as per the provisions of the GERC (Standard of Performance of Distribution Licensee) Regulations, 2005 as amended from time to time
18.	Power to give directions, to relax & to amend	Vested with the Commission