SOUTH BIHAR POWER DISTRIBUTION CO. LTD.,
Registered Office: Vidhyut Bhawan, Bailey Road, Patna-21.
A Govt. of Bihar Undertaking
(Department of Commercial)
CIN No. U40109BR2012SGC018890

Illuminating lives...

Notification No.....500..... Dated.....28/09/2018
SBC-1014/Com. (Misc.)

Guidelines for Rooftop Solar Grid Interactive Systems Based on Net-Metering and Gross Metering

Introduction:

In order to promote development of roof top and solar photovoltaic systems in the state, Hon'ble BERC has framed Regulation called Bihar Electricity Regulatory Commission (Rooftop Solar Grid Interactive Systems based on Net and Gross Metering) Regulations, 2018 and notified in Bihar Gazette vide Notification No. 301 dated 03.04.2018. These Regulations permit consumers or third party to install roof top solar photovoltaic systems in consumers' premises with the provision of net metering or gross metering arrangement.

In light of repealing of BERC (Roof Top Solar Grid Interactive system based net metering) Regulation 2015, earlier issued guideline by the DISCOMs for implementation of net metering system is also repealed.

To implement the provisions of the said Regulations, following procedure is hereby prescribed for the field offices and the consumers/developers for installation of Roof Top Solar Photo Voltaic (RTSPV) systems with net metering or gross metering arrangement to the eligible consumers' premises.

1. Short Title, extent and Commencement:

1.1. The BERC (Rooftop Solar Grid Interactive Systems based on Net and Gross Metering) Regulations, 2018(*herein referred as Regulation*) and its amendments issued thereof as notified by the BERC may be referred in continuation with these guidelines.

1.2. The guideline shall come into force from its date of notification and shall be applicable across the licensed areas of Distribution Licensee.

2. Definitions and Interpretations

2.1. In this guideline, unless the context otherwise requires,

a) "**Accuracy Class Index**" shall mean the index as specified in Central Electricity Authority (Installation & Operation of Meters) Regulations 2006 and subsequent amendments thereof;

b) "**Developer**" means an Individual or consumers or third party owner who is willing to develop Rooftop Solar system.

c) "**Gross Meter**" means a unidirectional energy meter installed at the point at which the electricity generated by the solar energy system of the eligible consumer is delivered to the grid of the distribution licensee;

d) "**Gross Metering**" means an arrangement for measurement of energy in a system under which rooftop or any other structure PV solar system installed in consumer premises delivers total electricity generated, to the distribution licensee;

e) "**Inter-Connection Agreement**" means the agreement entered into by the Licensee and the eligible consumer or third party or developer for connecting rooftop Solar PV system to the distribution system;

f) "**Interconnection Point**" means the interface point of the Solar PV power generation facility with the distribution system of the Licensee. The interface point shall be the appropriate meter as per CEA (Installation and Operation of Meters), Regulations, 2006 and subsequent amendments thereof, installed at consumer's premises or distribution substation;

g) "**kWp**" means kilo Watt peak at Solar for the purpose of these guidelines 1 kW*peak* equal to 1 kVA (AC) of contract demand, equal to 1 kW (AC) of Sanction load ;

h) "**Net meter**" means a bi-directional energy meter capable of recording both import and export of electricity for recording the import and export of electricity as the case may be; which shall be an integral part of the net metering system;

i) **"Net metering"** means an arrangement for measurement of energy in a system under which rooftop or any other structure solar system installed at eligible consumer premises delivers surplus electricity, if any, to the Distribution Licensee.

j) **"Rooftop PV solar system"** means the solar photo voltaic power system installed on the rooftops or any other structure in consumer premises that uses sunlight for direct conversion into electricity through photo voltaic technology;

k) **"Regulation"** means the Bihar Electricity Regulatory Commission (Rooftop Solar Grid Interactive Systems based on Net Metering and Gross Metering) Regulations, 2018 and its amendments thereof issued by the Bihar Electricity Regulatory Commission.

l) **"Sanction Load"** is defined as the load that consumer has been allotted in the consumer agreement.

m) **"Solar Meter"** means a unidirectional energy meter installed as an integral part of the net metering system , at the point at which the electricity generated by solar energy system is delivered to the main panel of the eligible consumer

n) **"Settlement Period"** means the period beginning from first of April in an English calendar year and ending with the thirty first of the March of the next year;

o) **"Third party owner"** means a developer who is generating solar energy on a rooftop not owned by him but on a consumer's rooftop by entering into a lease / commercial agreement with the rooftop owner.

2.2 All other words and expressions used in these guidelines although not specifically defined herein above, but defined in the Act/ Regulation, shall have the meaning assigned to them in the Act / Regulations.

3. Scope and Application:

3.1. The eligible consumers of electricity in the area of the distribution licensee can avail the facility of RTSPV under net metering or gross metering arrangement in pursuant to the Regulation.

3.2. The eligibility criteria for Grid interactive RTSPV system under net or Gross metering arrangement has been prescribed in the Regulation which *inter alias* includes;

a. The capacity of Solar interactive system should not be less than 1 KWp (Kilo Watt Peak)

b. The capacity of solar interactive system shall not exceed the sanctioned / contracted load of the eligible consumer.

c. The provision of net or gross metering arrangement shall be available to the eligible consumer including third party owners, who intends to install grid connected RTSPV system, in its area of supply on non-discriminatory and first come first serve basis.

d. The eligible consumers availing net metering facility under the Regulation *shall not be allowed* to avail gross metering facility. Further the eligible consumers availing either net metering or gross metering facility under the Regulation shall not be allowed to avail banking facility.

e. The cumulative capacity to be allowed at a particular distribution transformer shall not exceed 80% of the capacity of the distribution transformer

3.3. The maximum permissible installed capacity of PCU/ inverter defined in kVA in Solar interactive system should not exceed the Contract Demand in kW i.e Consumer having contract demand of 1 kW should not be allowed to install PCU/ inverter having capacity exceeding 1kVA.

3.4. The installation of Net metered rooftop solar systems on consumer premises will utilize the same service line and installation (which is currently being used by the consumer for drawl of power from the distribution licensee) for injection of power into the grid.

3.5. The installation of Gross metered rooftop solar systems on consumer premises shall use a separate service line (other than which is currently being used by the consumer for drawl of power from the distribution licensee) for injecting total generated power into the grid system. Such service line up to the nearest service pole/ distribution transformer, as the case may be, shall be laid by the eligible consumer at its own cost.

4. Application Procedure

For LT Consumer:

4.1. The Eligible Consumer who intends to install a RTSPV under Net Metering or Gross Metering arrangement shall submit application to the Revenue collection counter in the office of the concern AEE, Electric Supply Sub-division in the application form annexed herewith as *Annexure –I* The application form can also be downloaded from the website of DISTRIBUTION LICENSEE/BSPHCL or can be obtained from the concerned Electric Supply Sub-division/Division office of DISTRIBUTION LICENSEE. The said application form must be duly filled in and accompanied by the requisite fee as per BERC prevalent rates.

4.2. Allotment of RTSPV system, in the concern supply area of distribution licensee shall be treated on first come first serve basis. The priority for such application shall be maintained at Subdivision office for which a separate register shall be maintained.

4.3. Within Seven (7) working days of receipt of Consumer's application, Assistant Electrical Engineer of concerned Electric Supply Subdivision shall perform general screening and register the application. An acknowledgement (Annexure –I) to be given mentioning that Licensee has received documents as per the documents enlisted in the application form along with requisite application fee.

4.4. Feasibility study for the connection of roof top solar system shall be completed by Assistant Electrical Engineer (AEE) of concerned Electric Supply Subdivision within fifteen (15) working days from the receipt of completed application.

4.5. **After carrying out technical feasibility study, concerned AEE will seek technical details of the equipment / components proposed to be used in the Rooftop Solar System from Applicant.**

4.6. The Applicant at his liberty can select a reputed system, installer, to gather technical information of rooftop solar system and furnish the technical details of PV modules, Inverters and other equipment's of the system, proposed to be installed by **the applicant within 15 days from the date of receipt of completed application by the Distribution Licensee for technical scrutiny.**

4.7. In case of any discrepancies between the information submitted in the application form and inspection of premises **the AEE will inform in written to the applicant within next seven (7) days.**

4.8. In case the connection feasibility report is found satisfactory and no further documents are required then concerned AEE of the Electric Supply Sub-division will sanction **the applied capacity within seven (7) working days. The sanction order shall be valid for a period of *six (6) months* from the date of approval.**

4.9. **The sanction order shall contain sanction load, supervision charge, security deposit amount , meter installation charge, etc. to be deposited by the eligible consumer as per BERC prevalent rates.** The applicant will deposit the charges within seven working days of issuance of the sanction order.

4.10. *The applicant will execute an inter connection agreement with the concerned AEE, Electric Supply Sub-division* post providing a declaration regarding completion of installation of Rooftop Solar Power Plant with document of solar modules having ISI mark.

4.11. After receipt of declaration towards work completion from the applicant, testing, commissioning and synchronization of rooftop solar system along with metering arrangement will be done under joint supervision of concerned AEE, Electric Supply Sub-Division and AEE, MRT,MRT Division within next seven (7) working days.

4.12. During the period of synchronization of Solar PV system to the network of Distribution Licensee, the concerned AEE, Electric Supply Sub-Division and AEE, MRT,MRT Division shall jointly inspect, calibrate and seal all the meters

as per requirement. The concerned AEE of the Electric Supply Sub-division will send service connection report to the billing office within 7 working days.

For HT / EHT Consumer:-

4.13. The Eligible Consumer who intends to install a RTSPV under Net Metering or Gross Metering arrangement shall submit application to the Revenue collection counter in the office of the concern AEE, Electric Supply Sub-division in the application form annexed herewith as *Annexure –I* The application form can also be downloaded from the website of DISTRIBUTION LICENSEE/BSPHCL or can be obtained from the concerned Electric Supply Sub-division/Division office of DISTRIBUTION LICENSEE. The said application form must be duly filled in and accompanied by the requisite fee.

4.14. The completely filled in application form along with the application fee as specified to be deposited at concern Subdivision office. However allotment of RTSPV system, in the supply area of distribution licensee shall be treated on first come first serve basis. The priority for such application shall be maintained at Subdivision office for which a separate register shall be maintained.

4.15. Within Seven (7) working days of receipt of Eligible Consumer's application, Assistant Electrical Engineer of concerned Electric Supply Subdivision shall perform general screening and register the application. An acknowledgement (*Annexure –I*) to be given mentioning that Licensee has received documents as per the documents enlisted in the application form along with requisite application fee .

For 11 kV Consumers

4.16. Feasibility study for the connection of rooftop solar system shall be done by AEE Supply within fifteen (15) working days from the receipt of complete application.

4.17. After carrying out technical *feasibility* study, the concerned AEE will *seek technical details* of the equipment / components proposed to be used in RTSPV system from applicant.

4.18. The applicant will have liberty to select a reputed system, installer, to gather technical information of Rooftop Solar System and furnish the technical details

of PV modules, Inverters and other equipments of the Rooftop Solar System, proposed to be installed by applicant within 15 days from the date of receipt of completed application to the Distribution Licensee for technical scrutiny.

4.19. In case of any discrepancies between the information submitted in the application form and inspection of premises the AEE will inform the applicant in writing within next 7 working days.

4.20. In case the connection feasibility report is found satisfactory and no further documents are required then concerned AEE-Supply will forward all the documents to concern EEE, ESD who will sanction the applied RTSPV capacity within 7 working days. The sanction order shall contain maximum permissible capacity of the rooftop solar system and shall be valid for a period of six (6) months from the date of approval.

4.21. The sanction order shall contain Sanction load, supervision charge, security deposit amount , meter installation charge, etc. to be deposited by the eligible consumer as per BERC prevalent rates. The applicant will deposit the charges within seven (7) working days of issuance of the sanction order.

4.22. The applicant will execute an inter connection agreement with the concerned EEE, Supply post receiving a declaration regarding completion of installation of Rooftop Solar Power Plant with document of solar modules having ISI mark.

4.23. After receipt of the declaration towards work completion from applicant and NOC from Electrical Inspector, testing, commissioning and synchronization of Rooftop Solar System; metering arrangement will be supervised by concerned EEE, MRT of the concerned MRT Division within next 7 working days. During the period of synchronization of RTSPV System with the electrical network of Distribution Licensee, the concerned EEE, ESD and EEE, MRT Division, shall inspect, calibrate and seal all the meters as per requirement.

4.24. The Eligible Consumer or third party as per applicability shall enter into an agreement with concerned Distribution Licensee in the prescribed format. The concerned EEE, of the Electric Supply Division will send service connection report to the billing office within 7 days.

For 33 kV & EHV Consumers

4.25. Feasibility study for the connection of rooftop solar system shall be done by EEE, ESD and EEE, MRT within fifteen (15) working days from the receipt of complete application. EEE, ESD will forward the application to the concerned ESE, ESC.

4.26. After carrying out technical feasibility study, the concerned EEE will seek technical details of the equipment / components proposed to be used in RTSPV system from applicant.

4.27. The applicant will have liberty to select a reputed system, installer, to gather technical information of Rooftop Solar System and furnish the technical details of PV modules, Inverters and other equipment's of the Rooftop Solar System, proposed to be installed by applicant within 15 days from the date of receipt of completed application to the Distribution Licensee for technical scrutiny.

4.28. In case of any discrepancies between the information submitted in the application form and inspection of premises the EEE, will inform the applicant in writing within next 7 working days.

4.29. In case the connection feasibility report is found satisfactory and no further documents are required then concerned ESE-Supply will sanction the applied RTSPV capacity within 7 working days. The sanction order shall contain maximum permissible capacity of the rooftop solar system and shall be valid for a period of six (6) months from the date of approval.

4.30. The sanction order shall contain Sanction load, supervision charge, security deposit amount and meter installation charge to be deposited by the eligible consumer as per BERC prevalent rates. The applicant will deposit the charges within seven (7) working days of issuance of the sanction order.

4.31. The applicant will execute an inter connection agreement with the concerned ESE, ESC post receiving a declaration from applicant regarding completion of installation of Rooftop Solar Power Plant with documents of various components of RTSPV system having ISI mark.

4.32. After receipt of the declaration towards work completion from applicant and NOC from Electrical Inspector, testing, commissioning and synchronization of

Rooftop Solar System; metering arrangement will be supervised by concerned EEE, ESD of the concerned Electric Supply Division and EEE MRT, MRT Division within next 7 working days. During the period of synchronization of RTSPV System with the electrical network of Distribution Licensee, the concerned EEE, ESD and EEE, MRT Division, shall inspect, calibrate and seal all the meters as per requirement.

4.33. The Eligible Consumer or third party as per applicability shall enter into an agreement with concerned Distribution Licensee in the prescribed format. The concerned EEE/AEE, of the Electric Supply Division / Sub-division will send service connection report to the billing office within 7 days.

5. Technical Standards and safety:

5.1. The interconnection of the RTSPV system with the network of the distribution licensee shall conform to the technical specifications, standards and provisions as provided in the *Central Electricity Authority* (Technical Standards for Connectivity of the Distributed Generation resources) Regulations, 2013 and provisions of the Central Electricity Authority (Measures related to Safety and Electric Supply) Regulations, 2010 as amended from time to time. The interconnection of RTSPV system with the distribution network shall be at the same voltage levels as being used by the consumer.

5.2. The Eligible consumer producer shall have the option of installing grid interactive solar power system with or without battery backup. In case the eligible consumer prefers connectivity with battery backup (full load backup/partial load backup), the inverter shall have separate backup wiring to prevent the battery/Solar power to flow into the grid in the absence of grid supply and manual isolation switch shall also be provided.

5.3. The consumer shall be responsible for safe operation, maintenance and rectification of any defect of the solar Energy system up to the point of net or gross Meter beyond which the responsibility of safe operation & maintenance shall rest with the distribution Licensee.

5.4. The distribution licensee shall have the right to disconnect the RTSPV System at any time in the event of possible threat/damage/O&M to its distribution system.

5.5. The net or gross meter and solar meter installed should conform to the standards, specifications and accuracy class as provided in the Central Electricity Authority (Installation and operation of Meters) Regulations, 2006, as amended from time to time and are installed in such a way that they are accessible for reading.

5.6. The consumer shall be solely responsible for any accident to human being/ animals whatsoever (fatal/non-fatal/ departmental/non-departmental) that may occur due to back feeding from the RTSPV system when the Grid supply is off..

In case of any accident, which can be attributable solely or partly to the act of negligence of consumer, the consumer shall be liable to compensate the damages incurred in terms of compensation if any to be paid to deceased/victims and to the Distribution licensee as decided by any CGRF/ombudsman/ BERC/court of law/state Government and other statutory bodies. So, consumer will ensure the functioning of anti-islanding system of solar modules 24 x 7.

5.7. The Distribution Licensee reserves the right to disconnect the Solar Energy System at any time in the following condition:

i. Event of possible threat/damage to its distribution system or damage to man and material.
ii. Emergencies or Maintenance requirement on the Distribution Licensee Network System.
iii. Hazardous condition existing on the Distribution Licensee system due to Operation of Solar Energy Generator or protective equipment as determined by the Distribution Licensee / BSPTCL / SLDC / Distribution Franchisee etc.

iv. Adverse electrical effects such as power quality problems on the electrical equipment of the other consumer of Distribution Licensee caused by the solar energy generator as determined by the Distribution Licensee.

5.8. The Distribution Licensee will have the liberty to conduct test on the RTSPV System and its associated systems as per relative standard & as per Distribution Licensee standard to ensure the quality of power.

5.9. Any alternate source of supply shall be restricted to the eligible consumer network and the consumer shall be responsible to take adequate safety measures to prevent battery power/ diesel generator power/ backup power etc. extending to Distribution Licensee LT Grid on failure of Grid supply.

5.10. The rooftop Solar power plant should be capable of detecting an unintended islanding condition. These systems must have anti – islanding protection to prevent any unfavourable conditions including failure of supply. IEC- 62116 shall be followed to test islanding prevention measure for Grid connected PV Inverters.

5.11. Every Rooftop Solar Power Plant shall be equipped with automatic synchronization device either with separate device or the same is inherently built into the inverter.

5.12. The Rooftop Solar System operating in parallel with the electricity system shall be equipped with the following protective function to sense abnormal conditions on electricity system and cause the rooftop Solar System to be automatically disconnected from the electricity system inappropriately:

i. **Over and under voltage trip functions** - If voltage reaches above 110% or below 80% of normal connected voltage respectively with a clearing time up to two second, however Distribution Licensee may prescribe a narrow range of Voltage for the purpose.

ii. **Over and under frequency trip functions** -If frequency reaches 50.5Hz or below 49.02Hz with a clearing time up to 0.2 second, however Distribution Licensee may prescribe a narrow range of frequency for the

purpose. The RTSPV System should cease to energize the circuit to which it is connected in case of any fault in this circuit.

iii. A voltage and frequency sensing and time delay function to prevent the RTSPV System from energizing a de- energized circuit and to prevent the System from reconnecting with electricity system unless voltage and frequency is within the prescribed limits and are stable for at least Sixty second is to be installed.

iv. A function to prevent the Rooftop Solar System from contributing to the formation of an unintended island, and cease to energize the electricity system within two (2) seconds of the formation of an unintended island.

5.13. The equipment of the RTSPV system shall meet following requirements, namely:

i. Circuit Breakers or other interrupting equipment shall be suitable for their intended application with the capability of interrupting the maximum available fault current expected at their location.

ii. The RTSPV System and associated equipment shall be designed so that the failure of any single device or component shall not potentially compromise the safety and reliability of the electricity system.

iii. Paralleling device of the Rooftop Solar System shall be capable of withstanding 220% of the normal voltage at the interconnection point.

5.14. Every time the Rooftop Solar System of the Eligible Consumer is synchronized to the Electricity System, it shall not cause voltage fluctuation greater than ±5% at the point of inter connection.

5.15. *Prior to synchronization of the Rooftop Solar System for the first time with electricity system, the applicant shall agree on the protection features and control diagrams as approved by licensee.*

5.16. The power conditioning unit shall have the features of filtering out harmonics and other distortions before injecting the energy into the system of the Distribution Licensee. The technical standards, power quality standards and inverter standards shall be as per relevant standards or as may be specified by CEA from time to time.

6. Metering Arrangement:

6.1. The metering system shall be as per the provisions of CEA (Installation & operation of meters) Regulations, 2006, CEA (Measures relating to Safety and electricity supply) Regulations, 2010 and CEA (Technical Standards for Connectivity of the distributed generation resources), Regulations, 2013, Bihar Electricity Supply Code, 2007 as amended from time to time and in conformity with the norms fixed by BERC / approved Technical Specification / Metering arrangements of the Discoms from time to time.

6.2. In case of Net Metering arrangement the interface meter (net meter) should be bi-directional energy meter capable of recording both import and export of electricity that can measure net energy import or the net energy export to the interconnected grid in particular ToD.

6.3. For the existing consumers, the consumer meter (if any) shall be replaced with the bi-directional/net meter. However the consumers having ABT compliant meters (capable of performing the functions of the Net Meter) shall not be required to install additional net meter.

6.4. The net meter should be a smart meter with the following characteristics:

a. The meters shall be of standard make that is certified by BIS/IEC/CBIP or any other superior specification as specified in Central Electricity Authority Regulations on installation and operation of NET and Gross meters.

b. Separate registers for Export and Import with MRI downloading facility.

c. All measuring registers for billing in accordance with prevailing Tariff Order and BESC 2007 with latest amendments.

d. The meter should be communicable with at least two dedicated communication ports and compatible for AMI standards.

e. The accuracy class of meters for EHT/HT/LT(whole current meters)/LT(CT operated) consumers , shall be as laid down in CEA Regulations.

f. Meter shall be installed at point(s) of supply as per BESC, 2007.

6.5. In Gross Metering arrangement, separate unidirectional energy meter should be installed at the point at which the electricity generated by solar energy system of

the consumer is getting delivered to the grid of the distribution licensee and a separate unidirectional energy meter is to be installed at Consumer load node.

6.6. A Separate solar meter shall be installed as an integral part of the net or gross metering system, at the point at which the electricity generated by solar energy system is delivered to the main panel of the eligible consumer.

6.7. Check meters shall be mandatory for RTSPV systems having capacity more than 20 kW. The Check meter shall be as par with the Main Meter.

6.8. For rooftop solar system with installations size less than and equal to 20 kW, the Check meters would be optional.

6.9. The cost of meter(s) (Net Meter / Gross Meter, Solar Meter, Check Meter) including Testing, Installation / Replacement cost etc. (if any) shall be borne by the eligible consumer.

6.10. Net Meter / Gross Meter, Check Meter and Solar Meter, shall be installed after testing and sealing in MRT lab of the Distribution Licensee for which consumer shall deposit necessary testing fee as prescribed in Bihar Electricity Supply Code, 2007 and its amendments issued from time to time

6.11. The metering arrangement of the RTSPV System shall be jointly inspected and sealed by the licensee on behalf of both the parties. It shall be tested by the licensee and installed in presence of consumer and the licensee with due acknowledgement.

6.12. 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 employed.

6.13. The schematic arrangement for interconnection of Rooftop Solar Power Plant with the grid of Distribution Licensee is shown at Annexure-III.

6.14. All the meters used under Net Metering and Gross Metering arrangement should be DLMS compatible.

6.15. In case the bills are prepared on the basis of MRI downloads or if meter reading is taken on the basis of Remote Meter-Reading (RMR) and the eligible consumer wish to have a record of the reading taken, he shall be allowed by Distribution Licensee.

6.16. The technical standards for meters shall be as per standards specified by CEA and different guidelines issued by the Distribution licensee from time to time.

6.17. The meter readings of all the connected meters shall be taken by the distribution licensee and shall form the basis of commercial settlement. The copy of the meter reading statement shall be handed over to the eligible consumer as soon as meter reading is taken by the meter reader. The eligible consumer can seek the meter reading details in case the meter reading is taken remotely and licensee shall provide the same.

7. Energy Accounting, Settlement and invoicing:

7.1. Eligible consumer / third party owner are free to choose either net or gross metering option for sale of power to Discom.

7.2. **For Net Metering Arrangement:**

a. For each billing period, the licensee shall show the quantum of injected electricity by eligible consumer in the billing period, supplied electricity by distribution licensee in the billing period, net billed electricity for payment by the eligible consumer for that billing period and net carried over electricity to the next billing period separately;

b. In the event the electricity injected exceeds the electricity supplied during the billing period, such excess injected electricity shall be carried forward to next billing period as electricity credit and may be utilized to net electricity injected or consumed in future billing periods(Restricted to current financial year);

c. In the event the electricity supplied by the distribution licensee during any billing period exceeds the electricity generated by the eligible consumer's rooftop solar system, the distribution licensee shall raise invoice for the net electricity consumption after taking into account any electricity credit balance remaining from previous billing periods; The net energy supplied to the eligible consumer has to be billed by the distribution licensee as per tariff in force applicable to that category of eligible consumers.

d. In case, the eligible consumer is under the ambit of Time of Day tariff (TOD), as determined by the Commission from time to time, the electricity consumption in any time block (e.g., peak hours, off-peak hours, etc.) shall be first compensated with the electricity generation in the same time block. Any cumulated excess generation over consumption in any other time block in a billing cycle shall be accounted as if the excess generation occurred during the off-peak time block.

e. The excess electricity measured in kilo-watt hour or kilo-volt-ampere hour, as the case may be, shall be utilized to offset the consumption measured in kilo-watt hour or kilo-volt-ampere hour and shall not be utilized to compensate any other fee and charges imposed by the distribution licensee as per the instructions of Bihar Electricity Regulatory Commission.

f. The distribution licensee in addition to consumer tariff shall be eligible to raise invoice for any other charges as allowed by the Bihar Electricity Regulatory Commission to the eligible consumers.

7.3. **In Gross Metering arrangement:**

a. The distribution licensee shall undertake meter readings for each billing period. The licensee shall also undertake energy accounting and settlement with the eligible consumer or the third party owner.

b. For each billing period, the licensee shall show the quantum of injected electricity by eligible consumer in the billing period and shall make payment to the eligible consumer or the third party, as the case may be, for the quantum of such injected electricity.

c. The quantum of injected electricity to be paid by the distribution licensee shall be at the ***Feed-in Tariff*** *approved* by the Commission for the relevant year.

However in Net Metering arrangement, if net electricity injected during at end of any settlement period i.e. 31st March remains unadjusted, no payment shall be made by the distribution licensee against such unadjusted net

electricity injected into the grid nor shall it be carried forward to the next settlement period.

7.4. In case net meter/ gross meter becomes defective,

a. In case of conspicuous failures like burning of main meter and erratic display of metered parameters the reading of check meter shall be used for billing purposes. However if both main and check meter becomes defective at once then billing shall be done as per BESC 2007 and prevalent BERC tariff order.

b. The consumer should ensure replacement of the defective meter within seven days.

7.5. In case of any dispute in billing, the consumer/ developer should file written representation mentioning the details of dispute to the concerned Electrical Executive Engineer/E.S.D. (for supply at LT level) or GM (Revenue) of the licensee in case of others. On receipt of the written representation, the authority (EEE/or GM) will ensure redressal of the dispute preferably within 30 days of receipt of such representation. In case the consumer/developer is dissatisfied by the disposal of his representation, he may file his grievance before CGRF.

8. Capacity Targets for Distribution Licensee:

8.1. The Distribution Licensee shall allocate net metering or gross metering arrangement to the eligible consumers including third party owners, who intends to install grid connected RTSPV system, in its area of supply on non-discriminatory and first come first serve basis as long as the total required capacity (in MW) does not exceed the target capacity determined by the Commission;

8.2. The cumulative capacity to be allowed at a particular distribution transformer shall not exceed 80% of the capacity of the distribution transformer; as per the BERC (Rooftop Solar Grid Interactive Systems Based on Net and Gross Metering) Regulations, 2018 and its amendments issued thereof.

8.3. The Distribution Licensee shall update capacity available at distribution transformer level for connecting RTSPV systems under net or gross metering

arrangement on yearly basis(preferably in 1st week of September) and shall provide the information on its website as well as to the Commission.

9. Applicability of Solar Renewable Purchase Obligation & Renewable Energy Certificates

9.1. The quantum of electricity consumed by the eligible consumer, who is not defined as obligated entity, from the RTSPV system under net metering arrangement shall qualify towards compliance of Solar Renewable Purchase Obligation (Solar RPO) for the Distribution Licensee.

9.2. The quantum of power generated by the RTSPV system will be measured as per the meter reading of the solar meter. Similarly, the quantum of electricity from the rooftop solar system under gross-metering arrangement, sold to the third party (other than the licensee) who is not defined as obligated entity, shall also qualify towards compliance of Solar Renewable Obligation (Solar RPO) for the Distribution Licensee.

10. Applicable Fee and Charges (Application Fee/Meter testing Fee , etc.):

Consumers/applicants seeking facility of Net or Gross metering as per these guidelines shall pay fees and charges (Application Fee/Meter testing Fee , etc.) as applicable and prescribed in the Tariff Order for respective categories of consumers.

11. Miscellaneous

a. The rooftop solar system under net or gross 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. Eligible consumer cannot avail banking facility.

b. In case of any inconsistency between these Guidelines and Bihar Electricity Regulatory Commission (Rooftop Solar Grid Interactive Systems based on Net and Gross Metering) Regulations, 2018 the provisions and meanings contained in the BERC Regulation shall prevail.

Annexure-I

Application for Net/Gross Metering and Grid Connectivity of Grid Connected Rooftop & Small Solar Photovoltaic System

To,

AEE

Electric Supply Sub Division.....

Date :

I/we herewith apply for grid connection for the solar PV plant of which details are given below :

1.	Name of applicant	
2.	Address of the applicant	
3.	Service connection number/Account Number & details of the premise	
4.	Low Tension/ High Tension	
5.	Telephonic/mobile number (s)/ E-mail ID	
6.	Aadhar No	
7.	PAN No.	
8.	Option for Net metering/ Gross metering	
9.	Application type (Consumer/ Third Party)	
10.	Details of Consumer Meter, Meter No, Make	
11.	Solar PV plant capacity (kilo watts)	
12.	Solar grid inverter make and type	
13.	Solar grid inverter has automatic isolation protection (Y/N) ?	
14.	Has a Solar Generation Meter been installed(Y/N) ?	
15.	Expected date of commissioning of solar PV system	
16.	Details of Bank Account No., IFSC Code, Branch Name	
17.	RTSPV already Proposed/connected in KW	

Documents Enclosed :

1. Copy of latest Electricity Bill.
2. Blank cancelled cheque of above bank A/c no.

3. Copy of Test reports of Equipments.
4. Identity Proof (Aadhar/ PAN/ Voter ID,etc.).

Certificate :- The above stated information is true to the best of my knowledge.

Place : Name :

Date : Signature :

ACKNOWLEDGMENT

Received documents as listed above along with an amount of Rs ..... towards requisite application fees for Solar PV plant Grid Connection from :

Name of Applicant:

Service Connection Number of premise:

Date:

Solar Plant Capacity:

Application registration No:

Remarks:

(Signature & office Seal)

Annexure -II

PERFORMA FOR TECHNIAL FEASIBILITY REPORT

SI. No.	Parameter	DISTRIBUTION LICENSEE Observation
A.	**Applicant Details :**	
1.	Name of the Applicant	
2.	Address of applicant	
3.	Application Registration Number	
4.	Category (DS/NDS etc.)	
5.	Type of connection : 1ph LT or 3 ph LT/HT	
6.	Size and type of LT Cable (1 Phase/3Phase)	
7.	Phone/mobile Number	
8.	E-mail	
9.	Sanctioned Load in KW/Contract demand in KVA	
B.	**Transformer Details :**	
1.	Location	
2.	Capacity in KVA	
3.	Total Connected load in KW	
4.	Tong tester reading of current in all 3 phase and neutral	
5.	RTSPV already Proposed/connected in KW	
6.	Proposed RTSPV capacity in KWp	
7	Proposed PCU/Inverter capacity in KVA	
8	Total Cumulative Capacity (Sl no 5+ Sl. No 6) in KWp of RTSPV connected to Transformer	
9.	Type of LT Cable/Conductor	
10.	Whether the transformer capacity is adequate to deliver the proposed RTSPV system in addition to existing solar RTSPV systems Note : (The Transformer shall be loaded up to 80% of capacity)	

C.	**Feeder Details :**	
1.	Name of the 11 or 33 or 132KV feeder	
2.	Name of the 132/33/11 KV Sub-Station	
3.	Type of the conductor/cable (size)	
4.	Total connected load on the feeder in KVA	
5.	Total capacity (KWp) of RTSPV systems connected on the feeder	
6.	Peak load on the feeder in Amps	
7.	Whether proposed RTSPV installation is technically feasible or not	Yes/No* (if it is not feasible, state reasons)

Enclosure: Single line diagram of the transformer and downstream network.

It is to certify that the above said RTSPV installation is technically feasible.

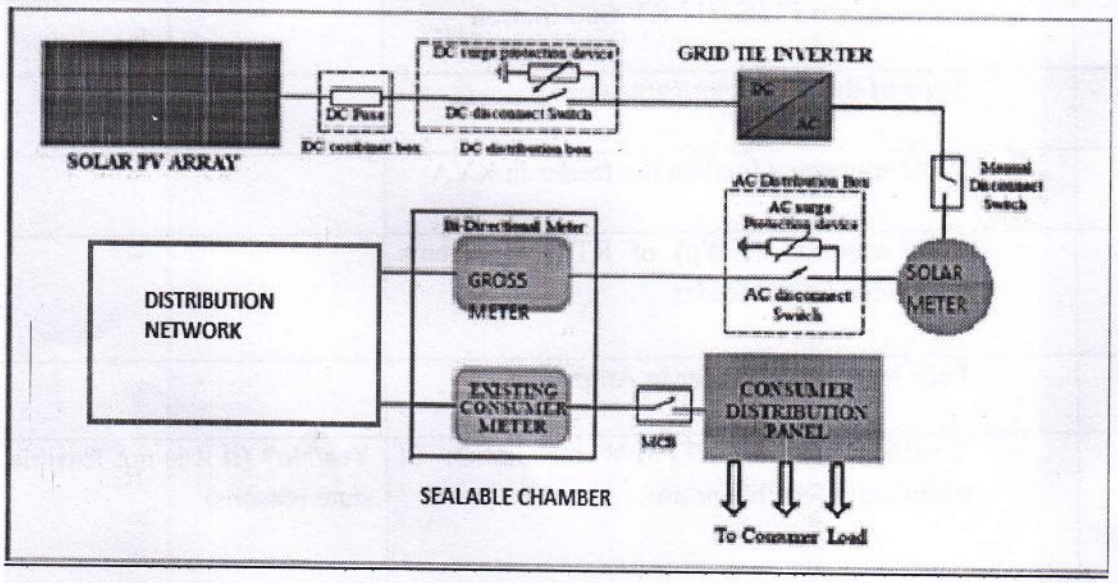
Name of Officer:

Designation:

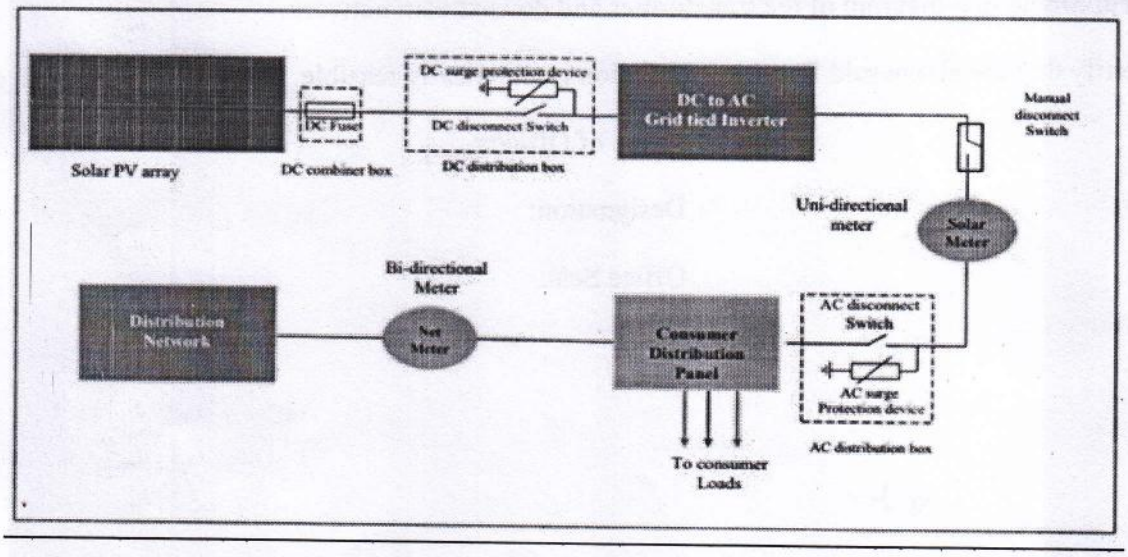
Office Seal:

Annexure –III Schematic Diagram towards Gross Metering and Net Metering

Schematic Diagram of Rooftop Facility for Gross Metering Interconnection



Single Line Diagram of Rooftop Facility for Net Metering Interconnection



Sd/-
(Vijay Kumar)
Chief Engineer (Com.)

Memo No…….. Dated……..

Copy forwarded to GM-Cum-CE, PESU, Patna/all DGM-Cum-ESE, Electric Supply Area/all Electrical Superintending Engineers, Electric Supply Circle/all Electrical Executive Engineers, Electric Supply Division/all Assistant Electrical Engineers, Electric Supply Sub-division/all Junior Electrical Engineers, Electric Supply Section, SBPDCL for information and necessary action.

Sd/-
(Vijay Kumar)
Chief Engineer (Com.)

Memo No…….. Dated……..

Copy forwarded to Director (Operations), SBPDCL/NBPDCL/GM (HR & Admin.)/GM (F&A)/GM (Revenue)/all Chief Engineers/DLA/CDBA, SBPDCL/Chief Engineer (Com.), NBPDCL for information and necessary action.

Sd/-
(Vijay Kumar)
Chief Engineer (Com.)

Memo No…….. Dated……..

Copy forwarded to OSD to CMD, BSP(H)CL/OSD to MD, SBPDCL/NBPDCL for kind information.

Sd/-
(Vijay Kumar)
Chief Engineer (Com.)

Memo No.500…….. Dated…28/09/2018……

Copy forwarded to Dy. Director, BREDA, Sone Bhawan, Patna, Bihar for kind information and necessary action.

28/9/18

(Vijay Kumar)
Chief Engineer (Com.)