HARYANA ELECTRICITY REGULATORY COMMISSION
Bays No. 33 - 36, Sector – 4, Panchkula-134109
Telephone No. 0172-2582531; Fax No. 0172-2572359
Website: - http://herc.gov.in Email-id: - secretary.herc@nic.in

Discussion Paper for inviting comments/objections from stakeholders/general public for finalization of the Haryana Electricity Regulatory Commission (Rooftop Solar Grid Interactive Systems Based on Net Metering/Gross Metering), Regulations, 2021.

Background:

The Haryana Electricity Regulatory Commission (HERC or "The Commission") in exercise of the powers under Section 181 of the Electricity Act, 2003 had notified Haryana Electricity Regulatory Commission (Rooftop Solar Grid Interactive System Based on Net Metering) Regulations 2014, subsequently the first amendment to the said Regulations was notified by the Commission on 9th June, 2015. Thereafter, HAREDA vide Petition No. PRO no. 37 of 2017 sought certain amendments in the ibid regulations to provide certain enabling provisions to promote rooftop solar generation to harness the solar energy to the target as set out by the GoI.

Subsequent to the above, The Haryana Electricity Regulatory Commission, in exercise of powers conferred on it by Section 61, Section 86 and 181 of the Electricity Act, 2003 and all other powers enabling it in this behalf, framed/redrafted the Haryana Electricity Regulatory Commission Net Metering Regulations, 2019 with the assistance of IDAM under USAID / INDIA (Pace –D Technical Assistance Program) after due consideration of the written comments/objections received from Public, Distribution Licensees and other stake holders like National Solar Energy Federation of India, AMPLUS Energy, Gateway Rail Freight Limited, Jindal Stainless (Hisar) Ltd, and views expressed/various issued raised in the Public Hearing, have accordingly made the necessary amendments in the draft Regulations and have finalized the Regulations for Rooftop Solar Grid Interactive Systems based on Net Metering entitled the Haryana Electricity Regulatory Commission (Rooftop Solar Grid Interactive System Based on Net Metering) Regulations,2019 notified on 25 October 2019.

The Ministry of Power, Govt of India (GoI), has recently issued/notified the Electricity (Rights of Consumers) Rules, 2020 on 31.2.2020 whereby laid down the rights of electricity consumers to minimum standards of quality to be ensured by the distribution's licensees. One noteworthy provision under Electricity (Rights of Consumers) Rules, 2020 in the rules11(4) provides/ mandates net metering for loads up to 10 kW and gross metering for loads greater than 10 kW. This provision is created under the section addressing the rights of consumers as prosumers (Rule 2M) and prosumers would have the same rights as the general consumer. They will also have the right to set up renewable energy generation units, including rooftop solar systems themselves or through a service provider.

The existing Regulations i.e. HERC (Roof top Solar Grid Interactive Systems based on the Net Metering) Regulations 2019 which doesn't have provision of gross metering necessitated the need to modification/revision of existing net metering regulations in line with the Electricity (Rights of Consumers) Rules, 2020 which mandates net metering for loads up to 10 kW and gross metering for loads greater than 10 kW.

In view of above to make the provisions of existing HERC Regulations in line with the new Electricity (Rights of Consumers) Rules, 2020 notified by the MoP/GoI, the following discussion paper has been prepared for public/Stakeholders consultations. The last date of submission of objections/comments/suggestions is 15.04.2021 till 05:00 P.M. and the public hearing in the matter will be held on 22.04.2021 at 11:30 A.M. through virtual court.

Based upon the feedback received on the discussion paper, the HERC Rooftop Solar Grid Interactive System based on Net Metering/Gross Metering) Regulations 2021 shall be given the final shape by the Commission.

Regulation No. HERC/ /2021 — In exercise of the powers conferred by Sections 61,66, 86(1)(e) and 181 of the Electricity Act, 2003 (Act 36 of 2003) and all other powers enabling it in this behalf, the Haryana Electricity Regulatory Commission hereby makes the following Regulations.

Chapter — I General

1. Short Title, Extent, and Commencement

1.1 These Regulations shall be called 'The Haryana Electricity Regulatory Commission (Rooftop Solar Grid Interactive Systems Based on Net Metering/Gross Metering),Regulations, 2021'

1.2 These Regulations shall come into force from the date of publication in the Official Gazette of Haryana.

1.3 These Regulations shall extend to the whole of the State of Haryana.

2. Definitions and Interpretations

2.1. In these Regulations, unless the context otherwise requires,

a) **"Act"** means the Electricity Act, 2003 (36 of 2003) and subsequent amendments thereof;

b) **"Agreement"** means the agreement entered into between the distribution licensee and the consumer for net metering/gross metering arrangement

c) **"Billing cycle or billing period"** means the period, as specified by the Commission, for which regular electricity bills, are prepared for different categories of consumers bythe distribution licensee;

d) **"Commission" or "HERC"** means the Haryana Electricity Regulatory Commission constituted under the Act;

e) **"Commissioning" or "date of commissioning"** means the date of synchronization of the rooftop solar system with the grid of the distribution licensee which shall also be certified by the appropriate officer of the distribution licensee;

f) **"Consumer"** means any person who is supplied with electricity for his own use by a licensee or the Government or by any other person engaged in the business of supplying electricity to the public under the Act or any other law for the time being in force and includes any person whose premises are for the time being connected for the purpose of receiving electricity with the works of distribution licensee, the Government or such other person, as the case may be;

g) **"Connected load"** expressed in kilowatt (kW), means aggregate of the manufacturer's rated capacities or in its absence assessed capacities of all energy consuming devices or apparatus connected with the distribution licensee's service line on the consumer's premises;

h) **"Contract demand"** means the maximum demand in kW or kilovolt ampere (kVA) (within a consumer's sanctioned load) agreed to be supplied by the licensee and indicated in the agreement executed between the licensee and the consumer. In case contract demand is not mentioned in the agreement, the sanctioned load or connected load as mentioned shall be considered;

i) **"Distribution licensee"** means a person granted a licence under Section 14 of the Act authorizing him to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply;

j) **"Electricity Supply Code"** means the Electricity Supply Code specified by the Commission under Section 50 of the Act and subsequent amendments/ re-enactments thereof;

k) **"Eligible consumer"** means a consumer of electricity in the area of supply of the distribution licensee, who intends to install or has installed a rooftop solar system in his premises to offset part of his own energy requirement under net metering up to 10 kW or sanctioned load whichever is less and gross metering above 10 kW and upto 2 MWp as provided in these Regulations;

l) **"Financial year" or "year"** means the period beginning from first day of April in a calendar year and ending with the thirty first day of the March of the next year;

m) **"Gross Metering"** means the arrangement of measurement of energy in a system under which entire energy generated from rooftop solar PV system installed at eligible consumer premises is delivered to the distribution system of the Licensee;

n) **"Gross Meter"** means a unidirectional energy meter installed at interconnection point at which electricity generated by Solar Photo Voltaic (SPV) system, is delivered to distribution licensee.

o) **"High tension"** means supply at high voltage or extra high voltage;

p) **"Interconnection point"** for rooftop solar systems under net metering/gross metering, shall mean the interface of solar power generation facility with the network of licensee i.e., at metering point. This can be within the consumer premises or outside at the nearest suitable point based on the voltage level at which the system can be connected as per the HERC (Electric Supply Code) Regulations, 2014, and subsequent amendments thereof;
Provided that the interface point shall be the appropriate meter as per CEA (Installation and Operation of Meters), Regulations, 2006 and subsequent amendments thereof,
Provided that the consumer may connect rooftop solar system at any convenient point in the load circuit;

q) **"kWp"** means kilo Watt peak

r) **"MWp"** means Mega Watt peak

s) **"Net meter"** or "bi-directional meter" means an appropriate energy meter which is capable of recording both import and export of electricity;

t) **"Net metering"** means an arrangement of energy metering under which rooftop solar system installed at an eligible consumer's premises delivers solar power simultaneously with the power supplied by the distribution licensee to the consumer's premises and deliver the surplus electricity, if any, to the distribution licensee after offsetting the electricity supplied by the distribution licensee during the applicable billing period or subsequent billing period as provided in these Regulations;

u) **"Obligated entity"** means the entity mandated by the Commission under Clause (e) of Subsection (1) of Section 86 of the Act to fulfil the Renewable Purchase Obligation (RPO) and identified under the Haryana Electricity Regulatory Commission (Terms and Conditions for determination of Tariff from Renewable Energy Sources, Renewable Purchase Obligation and Renewable Energy Certificate) Regulations, 2017 and subsequent amendments/re-enactments thereof;

v) **"Premises"** means rooftops or/and any area on the land, building or infrastructure or part or combination thereof in respect of which a separate meter or metering arrangements have been made by the licensee for supply of electricity to the consumer;

w) **"Prosumer"** means a person who consumed electricity from the grid and can also inject electricity into the grid for distribution licensee, using same point of supply.

x) **"Rated capacity of rooftop solar system"** means the transformation capacity of the inverter forming part of the rooftop solar system;

y) **"Rooftop solar system" or "rooftop solar grid interactive system"** means the solar photovoltaic power system installed on any part of a premises of the eligible consumer located within the area of distribution licensee that uses solar energy for its direct conversion into electricity;

z) **"Renewable Energy Certificate (REC)"** means the certificate issued in accordance with the procedures prescribed in Central Electricity Regulatory Commission (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations,2010 and subsequent amendments thereof.

aa) **"Sanctioned load"** means the load in kW (kilowatt), or BHP (Break Horse Power), agreed to be supplied by the licensee to the consumer;

ab) **"Settlement period"** means the period beginning from the first of April in a calendar year and ending with the thirty first of March of the next year, i.e., same as 'financial year;
Provided that the first settlement period for a newly commissioned roof top solar system will be from the date of commission to March of next year.

(ac) **"Solar meter"** means a unidirectional energy meter installed as an integral part of the net metering system at the point at which electricity generated by Solar Photo Voltaic (SPV) system, is delivered to the main panel of eligible consumer;

(ad) **"Tariff order"** in respect of a distribution licensee means the ARR/Tariff Order issued by the Commission for that distribution licensee for the relevant year indicating the retail supply rates to be charged by the distribution licensee from various categories of consumers for supply of electrical energy and for other services;

(ae) **"Third party owner"** means a developer who is generating solar energy on a rooftop but does not own the rooftop but enters into a lease / commercial agreement with the rooftop owner. In case of gross metering arrangement owned by third party, he shall also enter into an agreement with the Distribution Licensee. However, if a consumer installs rooftop solar PV system in his premises through a third party and wishes to avail net metering facility, then only the eligible consumer shall enter into an agreement with the Licensee;

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

2.3. All other words and expressions used herein but not specifically defined in these Regulations or in the Act but defined under any law passed by the Parliament/State Legislation applicable to the electricity industry in the State shall have the meaning assigned to them in such law.

Chapter — II

Scope, Eligibility, and Applicability

3. Scope and Applicability

3.1. These Regulations shall apply to all the distribution licensee(s) and the eligible consumers of electricity of distribution licensees within the State of Haryana.

3.2. The eligible consumer may install the rooftop solar system under net metering/gross metering arrangement which:

a) shall be within the permissible rated capacity as defined under these Regulations;
b) shall be located in the consumer premises;
c) shall interconnect and operate safely in parallel with the distribution licensee's network.

3.3. The rooftop solar grid interactive system installed in a premises by an eligible consumerof distribution licensee may be self-owned or third party owned.

3.4. The rooftop space available in the Government organizations/ institutions/ buildings can also be provided on lease rent to independent power producers/ RESCO developers for setting up of rooftop solar systems.
Provided that the Government organizations/ institutions/ buildings, may also set up rooftop solar systems of permissible capacity as defined under these regulations on theirown or through third party, under net metering/ gross metering.

3.5. The facility of Net metering shall not be available to Open Access consumers.

3.6. These Regulations do not preclude the right of any person or state authorities to undertake rooftop solar projects of capacity above the limit of 2 MWp capacity through alternative mechanism.

3.7. In case a person is applying for a new electricity connection with the distribution licensee(s) along with rooftop solar system under net

metering/gross metering, the distribution licensee(s) shall grant the connection subject to technical feasibility and admissibility of installation of applied capacity of RTSS as per these regulations. The refusal of the said application shall be accompanied with a Speaking Order.

3.8. A rooftop solar grid interactive system that has not received technical feasibility approvalat the time of notification of these Regulations shall be required to be set up under theseRegulations.

4. General Principles:

4.1. The distribution licensee shall allow the eligible consumers net metering or gross metering in its area of supply on a non-discriminatory and first come first served basis.

4.2. Any eligible consumer, who intends to discontinue net metering or gross metering arrangement with the distribution licensee shall be allowed, subject to a written notice to the distribution licenseemade at least one month in advance. Any excess energy generation remaining unadjustedas on the date of termination of the agreement shall not be adjusted by the distribution licensee.

4.3. Network Augmentation:

a) In case network augmentation is required for LT consumers the cost of network up- gradation/ augmentation/strengthening shall be completely borne by the distribution licensee. The network up-gradation/ augmentation/strengthening work shall be executed by the distribution licensee.

b) In case network augmentation is required for HT consumers the cost of network up- gradation/ augmentation/strengthening shall be borne by both the eligible consumer and the distribution licensee in the ratio of 50:50. The network up-gradation/ augmentation/strengthening work may be executed by the distribution licensee or the HT consumer.

4.4. **Control Period:** The Regulations shall come into force from the date of notification and shall stay in force up to any amendment or repeal of the same.

5. Eligible Consumers and Project Capacity:

5.1. All consumers of electricity in the area of supply of the distribution licensee shall be eligible to avail net metering/gross metering for the

establishment of rooftop solar systems on a first- come-first-serve basis subject to the technical limitations as outlined in these Regulations.

Provided that the consumer shall be eligible to install rooftop solar system of capacity asspecified in these regulations.

Provided that the eligible consumer or third-party owner as the case may be availing gross metering arrangement under these Regulations shall not be allowed to apply for net metering arrangement within the same premises

Provided that the eligible consumer availing net metering arrangement under these Regulations shall not be allowed to apply for gross metering arrangement within the same premises

Provided that If the eligible consumer or third party owner installs solar rooftop system under the gross metering scheme, the entire power generated from such an installation shall be injected to the distribution system of the Licensee at the interconnection

5.2. **Transformer Loading:**

The Distribution Licensee shall provide information on its website regarding capacity available on distribution transformer(s) for feeding the eligible consumer at different locations for connecting rooftop solar PV system within three months from the date of commencement of these Regulations, and shall update the same within one month of the start of the subsequent financial year under intimation to the Commission.

Provided that the capacity to be allowed in the area fed from the distribution transformer (DT) or any other transformer from which power is fed to the eligible consumer is 100% of that DT or any other transformer.

Provided that if augmentation of transformer/distribution network is required, then upto total 10 kWp solar rooftop installation the consumer would not pay any system upgradation charges whereas, above this the consumer will pay at the rate of Rs 1000 per kWp as cost of augmentation of system. e.g. a consumer willing to install a 15 kW RPV Plant shall be paying Rs 5,000 (5×1000) as RSPV cost to the utility.

Provided further that in case of multiple applications from the consumers or third-party owners fed through a transformer for participation in the scheme, the connectivity with the rooftop solar PV system shall be allowed on first come first serve basis.

5.3. The maximum rated capacity of rooftop solar system, to be installed by any eligible consumer under net metering in his premises, shall not

exceed its connected load within limit of 10 kW whereas under gross metering eligible consumer can install the maximum rated capacity of rooftop solar system in his premises up to maximum of 2MWp.

Provided further that minimum rated capacity of rooftop solar system that can be set up under net metering/gross metering arrangement shall be not less than 1 kW.

Provided also that a variation in the rated capacity of the system within a range of five percent shall be allowed with reference to the capacity caps given above

Provided also that distribution licensee shall accept SPV Power as per useful life of SPV System.

Chapter — III
In House Roof Top Solar Monitoring Mechanism

6. In House Roof Top Solar Monitoring Mechanism

6.1. Every distribution licensee shall constitute an in-House Roof Top Solar Monitoring Mechanism, without any additional expenditure, within one month from the date of notification of these Regulations

6.2. The details of Constitution and functions of such in house Monitoring Mechanism has been attached in Annexure of these Regulations.

Chapter — IV
Interconnection with the Grid — Technical Standards and Safety

7. Interconnection with the Grid:

7.1. The voltage level for interconnection with the grid shall be as specified in the Haryana Electricity Supply Code or the voltage level at which an eligible consumer has been given supply by the distribution licensee. The cost of evacuation system and interconnection of roof top solar PV system with the distribution system shall be borne by the eligible consumer or third party owner, as the case may be.

7.2. The interconnection of the rooftop solar system with the network of the distribution licensee shall conform to the technical standards for connectivity of distributed generation resources specified under the *CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013*, and subsequent amendments thereof.

7.3. The interconnection of the rooftop solar system with the *distribution* system of the licensee shall also conform to the relevant provisions of the *CEA (Measures Relating to Safety and Electric Supply), Regulations, 2010*, as amended from time to time.

7.4. The eligible consumer shall be responsible for safe operation, maintenance and rectification of any defect of the rooftop solar system up to the point of net meter or gross meter, beyond which the responsibility of safe operation, maintenance and rectification of any defect in the system, *including* the net meter, shall be that of the distribution licensee.

7.5. The distribution licensee shall have the right to disconnect the rooftop solar system at any time in the event of threat/damage from such rooftop solar system to its distribution system to prevent any accident or damage, without any notice. The distribution licensee may call upon the consumer to rectify the defect within a reasonable time.

7.6. The rooftop solar system must be capable of detecting an unintended islanding condition. The system must have anti-islanding protection to prevent any feeding into the grid in case of failure of supply or grid. Applicable IEC/IEEE technical standards shall be followed to test islanding prevention measure for grid connected PV inverters.

7.7. The rooftop solar system must qualify the technical requirements for grid interconnection with the network of the distribution licensee and it shall be separately grounded/earthed.

7.8. Any alternate source of supply shall be restricted to the consumer's network and the consumer shall be responsible to undertake adequate safety measures to prevent battery power/diesel generator power/backup power extending to grid on failure of distribution licensee's grid supply.

7.9. Every rooftop solar system shall be equipped with automatic synchronization device.

Provided that the rooftop solar system using inverter shall not be required to have separate synchronizing device, if the same is inherently built into the inverter.

7.10. The inverter shall have the features of filtering out harmonics and other distortions before injecting the energy into the system of the distribution licensee. The Total Voltage Harmonic Distortion (THD) shall be within the limits specified in the Indian Electricity Grid Code (IEGC)/IEEE technical standards.

7.11. The Technical Standards/Parameters/Regulations mentioned in this Section shall be followed as per the latest applicable/modified/amended versions of the corresponding Standards/Parameters/Regulations.

8. Technical Standards:

All technical and operational aspects of rooftop solar system shall conform to the standard specified in the following Regulations/Codes, wherever applicable, as amended from time to time:

a. The HERC (Haryana Grid Code) Regulations, 2009
b. The HERC (Electricity Supply Code) Regulations, 2014;
c. The CEA (Technical Standards for Connectivity of the Distributed GeneratingResources) Regulations, 2013;
d. The CEA (Installation and Operation of Meters) Regulations, 2006;
e. The HERC (Standards of Performance of Distribution Licensee and determination of Compensation) Regulations,2020;
f. The HERC Distribution System Planning and Security Standards and OperatingStandards;
g. The CEA (Measures relating to Safety and Electric Supply) Regulations, 2010; and
h. All other relevant Regulations issued from time to time.

9. Third Party Owned Rooftop Solar PV system based on Net Metering /Gross Metering:

9.1. The third party owned rooftop solar PV net metering or gross metering model may consist of the developer or intermediaries leasing out solar PV system to interested rooftop owners. The owner of the premises provides the rooftop and engages a turnkey installer to design and install the system. The installers may also offer integrated service of leasing, commissioning and maintenance of Solar PV system to owners and guaranteeing standards of performance.

9.2. In the third party owned solar PV system based on net metering, the electricity generated from such plants/system shall be used to meet the eligible consumer's internal electricity needs upto the capacity allowed under the regulations, while in case of gross metering the generation shall be fed into the Grid (network of licensee) at the interconnection point.

9.3. The developer shall continue to be the owner of equipment in third party owned system,to qualify for claiming depreciation on capital cost for the solar PV system with associated direct tax benefits, if any.

9.4. For all intents and purposes, the distribution licensee shall deal with the rooftop owneror consumer only and arrangement between rooftop owner and developer shall be personal to them.

Chapter — V
Metering, Energy Accounting, and Settlement

10. Metering

10.1. The metering system shall be as per CEA (Installation and Operation of Meters) Regulations, 2006, as amended from time to time.

10.2. The solar meter (a unidirectional meter) is required to be installed as an integral part of the net metering/gross meter system at the point at which the electricity is generated by Solar Energy System and delivered to the main panel.

10.3. The net metering equipment (Bi-directional meters) and the Solar meter/Gross meter (unidirectional) as per CEA Regulations shall be installed and maintained by the distribution licensee at the cost of the eligible consumer.

Provided that the eligible consumer may procure the net meter/solar meter/gross meter of the technical specification of the distribution licensee and present the same to the distribution licensee for testing and installation as per provisions of the Electricity Supply Code. The location of the meter shall be as per CEA Metering Regulations.

Provided further that for all rooftop solar systems of capacity 20 kW and above, solarmeter/gross meter shall be Automated Meter Reading (AMR).

Provided also that it will be mandatory to install adequate communication/data telemetry equipment with the rooftop solar system of capacity 50 kW and above, and share relevant data with the distribution licensee as per the requisite format.

Provided also that a check meter shall be mandatory for roof top solar PV system of rated capacity more than 50 kWp by the eligible consumer at his cost

10.4. The provisions of meter rentals shall be governed as per the Schedule of General and Miscellaneous charges for Distribution and Transmission licensee, 2019 as amended from time to time.

10.5. It shall be the distribution licensee's responsibility to satisfy itself regarding the accuracy of the meter(s) before it is installed and the distribution licensee shall ensure that the meters have been duly tested before Installation.

10.6. In case of multiple rooftop solar plant within a premise, the Net Meter and the Solar Generation Meter/ Gross Meter shall be installed at such locations in the premises or outside the premises of the eligible consumer or person as would enable easy access to the distribution licensee's representative for meter reading.

10.7. The installed meters shall be jointly inspected and sealed by the distribution licensee in the presence of the consumer as per the procedure laid down in HERC Electricity Supply Code 2014 as amended time to time.

10.8. The meter reading taken by the distribution licensee shall form the basis of commercial settlement.

11. Energy Accounting — Net Metering/Gross Metering Arrangement:

11.1. **Energy Accounting**: The energy accounting and settlement procedure for consumers installing and operating rooftop solar system under net metering/gross metering arrangement shall be as per the following procedure:

For Net Metering:

a) Electricity generated from a rooftop solar system shall be cumulatively capped at 90% of the electricity consumption by the consumer at the end of settlement period which shall be the relevant financial year. In case solar power system is connected to the grid during part of the year, the 90% capping shall be on the electricity consumption from the date of connection (to the grid) to the end of the financial year. The carry forward of excess energy generation shall be allowed from one billing cycle to the next billing cycle up to the end of the same financial year. Any excess generation (above 90%) at the end of the financial year shall not be offset against the consumer's consumption. There shall be no carry forward of excess energy to the next financial year.

b) For each billing period, the distribution licensee will provide the following:

i. The quantum of electricity injected by the rooftop solar system in the grid in the billing period, including opening and closing balances;

ii. The electricity supplied by the distribution licensee to the eligible consumer in the billing period, including opening and closing balance;

iii. The net billed electricity, for which a payment is to be made by the consumer for that billing cycle and net energy credits carried over to the next billing cycle

.

c) In case the electricity injected by the rooftop solar system exceeds the electricity consumed during the billing period, such excess injected electricity shall be carried forward to the next billing period as electricity credit and may be utilized in the following billing periods but

within the same settlement period;

d) In case the electricity supplied by the distribution licensee during any billing period exceeds the electricity injected in the grid 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 the previous billing periods;

e) In case the eligible customer is under the ambit of time of day tariff, as determined by the Commission, the electricity consumption in any time block (e.g., peak hours, off-peak hours, etc.) shall be first compensated with the electricity injection in the same time block. Any excess injection over consumption in any time block in a billing cycle shall be carried forward to the corresponding time block in the subsequent month for adjustment purpose against energy supply at the lowest applicable Tariff across all the slots.

f) The excess injected electricity measured in kilowatt hour (kWh)/kVAh shall only be utilized to offset the consumption measured in kWh/kVAh and shall not be utilized to compensate any other fee and charges imposed by the distribution licensee;

g) The unadjusted net credited units of electricity shall be settled by the distribution licensee at the end of settlement period. These unadjusted units shall lapse at the end of the settlement period and shall not be paid for by the distribution licensee;

Provided that unadjusted net credited units of electricity from solar agricultural pump sets under Net Metering shall be settled by the distribution licensee at the end of settlement period @ Rs.1 per unit.

Provided further that the solar agriculture pump sets which are not covered under the Net Metering regime shall also be paid @ Rs. 1 per unit under gross metering. The power so purchased shall also count towards the solar RPO obligation of the licensee.

11.2. In case the applicable tariff provides for billing on kVAh basis, the net drawl or injection of energy shall also be measured in kVAh.

11.3. Regardless of availability of electricity credits with the eligible consumer during any billing period, the consumer will continue to pay applicable charges such as fixed/demand charges, Government levy, etc.

11.4. Minimum monthly charges (MMC), where applicable, shall continue to be related to total consumption of the consumer and not to the net consumption.

11.5. The distribution licensee shall accept the solar power as per the useful life of 25 years of the rooftop solar system unless the solar power

generator ceases to be a consumerof the licensee or the rooftop solar system is abandoned earlier.

11.6. In case an eligible consumer leaves the system, that consumer's unused credits for excess energy generated shall be considered as deemed injection and shall not be paid for by the distribution licensee.

11.7. The distribution licensee will provide the following details along with the electricity bill relating to each billing period:

a) Quantum of electricity injected into the distribution system by the rooftop solarsystem;

b) Quantum of electricity supplied by the distribution licensee to the eligible consumer;

c) Quantum of net electricity that has been billed for payment by the eligible consumer;

d) Quantum of electricity credit available to the eligible consumer, which is to becarried over from the previous billing period;

For Gross Metering:

i. Meter readings shall be taken as per the applicable cycle as provided in the HERC (Electricity Supply Code) Regulations 2014 and subsequent amendments thereof;

ii. The case of rooftop solar PV system under gross metering arrangement the Licensee shall undertake energy accounting and settlement with either the eligible consumer or the third-party owner whosoever is a signatory of the interconnection agreement with the Licensee.

iii. The energy accounting and settlement procedure for eligible consumers/third party owners installing and operating rooftop solar PV system under gross metering arrangement shall be as per the following procedure:

a. For each billing period, the Licensee shall show the quantum of electricity injected by the rooftop solar PV system installed at the premises of the eligible consumer in the billing period.

b. The Distribution Licensee shall reimburse the eligible consumer or the third-party owner as the case may be for the quantum of injected electricity by the rooftop solar PV system during the billing period by way of 'Solar Injection Compensation'.

Provided that the Solar Injection Compensation to be paid by the Distribution Licensee to the eligible consumer or third-party owner as the case may be shall the last lowest tariff discovered through competitive bidding and conveyed by HPPC and adopted by the Commission shall be applicable.

iv. Late payment surcharge on delayed payment of the Solar Injection Compensation shall be levied in the same manner as per the procedure laid down by the Commission in the relevant HERC (Electricity Supply Code) Regulations,2014 and subsequent amendments thereof;
Provided that such delayed payment surcharge shall also be payable to the third-party owner in the same manner as per procedure specified for the consumer of the Licensee in the HERC (Electricity Supply Code) Regulations 2014 and subsequent amendments thereof;

v. There shall be no deemed generation charges payable to the eligible consumer or third party owner of the solar rooftop system.

vi. The Distribution Licensee shall be responsible for billing of the electricity injected by the rooftop solar PV system into the distribution system. The bills prepared by the distribution license shall necessarily include the following:

a. Quantum of electricity injected into the distribution system by the rooftop solar PV system.

b. Quantum of Solar Injection Compensation payable by the Licensee.

Provided that the billing period and due date of the bills shall be the same as that of the eligible consumer in whose premises the solar system has been installed.
Provided also that Licensee shall reimburse the eligible consumer or third-party owner of the solar rooftop system as the case may be, within the due date of the electricity bill of the consumer in whose premises the rooftop solar PV system has been installed.

12. Applicability of Other Charges

The rooftop solar system commissioned under these Regulations, whether self-owned or third party owned installed on the premises, shall be exempted from all wheeling, cross subsidy, transmission and distribution, and banking charges and surcharges.

13. Energy Accounting During Meter Defect/Failure/Burnt

13.1. In case of defect/failure/burnt of the net meter/gross meter, the rooftop solar system owner shall report the failure to the distribution licensee in the specified format of distribution licensee.

13.2. The distribution licensee shall undertake necessary action and replace the meter as specified in the *HERC (Electricity Supply Code)* Regulations, *2014*, and amendments thereof.

13.3. During the period the meter remained defective, the distribution licensee may consider the energy generated by the rooftop solar for the solar energy generation benefits by considering 14% CUF.

Provided that the defective meter shall be replaced within the prescribed time period as mandated under HERC Supply Code Regulations, 2014 as amended from time to time.

CHAPTER — VI
Application Process, Procedure, and Fee

14. Application Process and Procedure

14.1. Filing of Application

a) The eligible consumer (applicant) may either apply online on the distribution licensee website and/or HAREDA website (Format 1) or submit the application in the prescribed form in the concerned subdivision. The application shall be accompanied with processing fee of Rs.1000/-.

b) An applicant that is a Trust/Committee/Housing Society/Partnership Firm/ Company etc. shall submit the Application Form (Format 1) along with an Authorization Certificate (Format 1(a)).

c) The applicant shall receive an acknowledgement email/short message service (SMS) on submission of the application. The acknowledgement email/SMS shall provide a unique registration number assigned to each applicant for future correspondence. (Format 1(b)).

d) The distribution licensee shall maintain a separate Application Register for net metering/gross metering applicants (manual or online) for reference and records.

14.2. Application Processing:

a) After submission of the application by the consumer, the distribution licensee shall undertake technical feasibility within 15 days of the date of acknowledgement issued to the applicant.

b) The distribution licensee shall undertake feasibility check (Form A) and submit the same to the Executive Engineer of the respective division.

c) If technical feasibility is found satisfactory, the distribution licensee

shall approve the application and intimate the same to the applicant by providing Letter of Approval (LoA) (Format 2) via email/SMS/post within 22 days from the issuance of acknowledgement of application.
Provided that for the proposed system size equal to or less than 5 kWp, technical feasibility approval shall be provided to the applicant within ten days from the date of application by the distribution licensee.

d) In case of any deficiencies are found in the application, on account of rooftop system capacity and available D.T. Loading as specified in these Regulations, during technical feasibility study, the same shall be intimated by the distribution licensee to the applicant via Format 2(a) through email/SMS notification within 15 days from the date of issuance of acknowledgement of application and within 5 days for proposed system capacity equal to or less than 5 kWp

e) The applicant shall remove all identified deficiencies within a period of 15 days from the receipt of intimation (Format 2(a)) and intimate the distribution licensee about the resolution of deficiencies (Format 2(b)) through email/post.
Provided that the DISCOM shall assess the resolution of deficiencies and provide Letter of Approval (LoA) (Format 2) to the applicant upon satisfaction. In case deficiencies are not removed in the said period, the application shall stand cancelled.

f) In case the technical feasibility is negative/non-satisfactory, the same shall be intimated to the applicant via Format 2(c) within 22 days from the issuance of the acknowledgement of application.

Provided that in case the technical feasibility is negative/non-satisfactory, the application shall stand rejected and fee shall be refunded within 7 days.

14.3. Approval for Installation:

a) The applicant shall install the rooftop solar system within 180 days from the receipt of LoA (Format 2), as per the Standards/Codes specified under these Regulations.

b) The aforesaid duration of 180 days is the maximum permissible time to the applicant for installation of rooftop solar, until an extension is provided in writing by the distribution licensee. However, the applicant shall be at liberty to complete the installation process before this period and approach the distribution licensee to initiate subsequent steps.

14.4. Signing of Agreement

a) The applicant shall submit duly filled and signed net metering/gross metering agreement using Format 3 to the distribution licensee(s) within 30 days of the date of issuance of LoA.

b) The agreement shall be then signed by the distribution licensee within three days of receipt of duly filled net metering/gross metering agreement from the applicant

14.5. Procurement of Meters

a) In case the applicant intends to procure meter from the distribution licensee, the applicant shall submit the Intimation Form (Format 4) along with an appropriate procurement fee to the distribution licensee. This shall be intimated to the distribution licensee at least 30 days prior to the expected date of submission of Work Completion Report (Format 5).

b) In case the applicant intends to procure meter on its own, the applicant shall submit the procured meter along with a safety certificate and request form for testing of meter (Format 4(a)) to the distribution licensee/test centres approved by the distribution licensee, at least 30 days prior to the expected date of submission of Work Completion Report (Format 5).

Provided that the consumer shall procure meter from the empaneled vendor of the Distribution Licensee.

c) The distribution licensee/test centres shall intimate the applicant (Format 4(b)) regarding the completion of the meter testing

14.6. **Work Completion and Commissioning**

a) **For system size greater than 20 kWp:**

i. The applicant/eligible consumer shall submit the Work Completion Report (Format 5) to the Office of Directorate of Electrical Safety, Government of Haryana (in case the project size is greater than 100 kWp) or to Chartered Engineers (as per the prevailing Sales circular/ instructions) for project size less than 100 kWp but above 20 kWp, with a copy to the distribution licensee. In case the consumer is availing subsidy, the work completion report is also to be shared with HAREDA.

ii. The appropriate authority, as specified above, shall undertake system inspection and safety checks, as per applicable practices, within seven days of submission of work completion report and

issue safety certificate.

Provided that in case the Work Completion Report is not satisfactory, the applicant shall resolve the discrepancies within seven days of receiving the intimation from the appropriate authority, and resubmit the Work Completion Report.

iii. The distribution licensee shall synchronize the system with the distribution grid post verification of the Work Completion Report, install meters, issue letter of synchronization, and Date of Commissioning (COD) (Format 7) to the applicant.

b) **For system size less than 20 kWp:**

i. The applicant shall submit the Work Completion Report (Format 5) to the distribution licensee. In case the consumer is availing subsidy, the work completion report is also to be shared with HAREDA.

ii. The distribution licensee shall undertake system inspection and safety checks, as per applicable practices, within seven days of submission of work completion report and undertake system synchronization.

iii. Provided that in case the Work Completion Report is not satisfactory, the applicant shall resolve the discrepancies within seven days of receiving the intimation from the appropriate authority, and resubmit the Work Completion Report.

iv. The distribution licensee shall synchronize the system with the distribution grid post verification of the Work Completion Report, install meters, issue letter of synchronization, and Date of Commissioning (COD) (Format 7) to the applicant.

14.7. **Subsidy**:

a. HAREDA/appropriate authority to develop process for delivery of subsidy to the consumer after installation of rooftop solar system within three months from the notification of these Regulations.

b. Eligible consumers interested to avail subsidy, may approach HAREDA/appropriate authority post receipt of LoA from the distribution licensee.

Chapter- VII
Other Provisions

15. Renewable Purchase Obligations:

The quantum of electricity consumed by eligible consumer, who is not

defined as obligated entity, from the rooftop solar system under net metering/gross metering arrangement shall qualify towards compliance of Renewable Purchase Obligation (RPO) for the distribution licensee.

Provided that any energy consumed by the obligated entities from rooftop solar over and above of its RPO shall also accounts towards the RPO of DISCOMs.

Provided further that in case of agriculture pump set up under net metering, all the solar energy generated by these pumps will be accounted towards incumbent DISCOMs RPO compliance.

Chapter- VIII
Miscellaneous

16. Power to Give Directions

The Commission may, from time to time, issue such directions and orders as considered appropriate for implementation of these Regulations.

17. Power to Remove Difficulties

If any difficulty arises in giving effect to the provisions of these Regulations, the Commission may, by an Order, make such provisions, not inconsistent to the provision of the Act and these Regulations, as may appear to be necessary for removing the difficulty.

18. Power to Relax

The Commission may by general or special order, for reasons to be recorded in writing and after giving an opportunity of hearing to the parties likely to be affected, may relax any of the provisions of these Regulations.

19. Power to Amend

The Commission may from time to time add, vary, alter, suspend, modify, amend or repeal any provisions of these Regulations after following the due process.

20. Repeal and Savings

Save as otherwise provided in these Regulations, the HERC (Rooftop Solar Grid Interactive System Based on Net Metering) Regulations, 2014 and 2019, are hereby repealed.

Provided that the rooftop solar systems commissioned during the applicability of the HERC (Rooftop Solar Grid Interactive System Based on

Net Metering) Regulations, 2014 & 2019 shall continue to be governed by the aforesaid Regulations and shall not be governed by the New Regulations.

By Order of the Commission

Secretory
Haryana Electricity Regulatory Commission

Annexure

A. DISCOM in house Rooftop Solar Monitoring Mechanism

1.1. Constitution of in-house Rooftop Solar Monitoring Mechanism

a) Every distribution licensee shall constitute an in-house Rooftop Solar Monitoring Mechanism, without any additional expenditure (under an officer of status/rank not below that of Superintending Engineer or equivalent).

b) The Monitoring Mechanism so constituted shall be provided with necessary authority and resources with relevant qualification and experience so as to execute the functions assigned to the Distribution Licensee under these Regulations.

c) Representative from the state nodal agency (SNA) (Project Officer) shall facilitate the Technical and Process Committee on subsidy related and allied matters.

1.2. The officers of Monitoring Mechanism shall meet at least once in a month to take up the functions assigned to it.

1.3. Functions

a) Design interconnection process and procedures, adhere to Policy and Regulatory provisions, support and address issues being faced for smooth deployment of rooftop solar in the State.

b) Appraise utility field officials about the changes in Policy and Regulatory provisions.

c) Develop web-based application system for ease in application filing, monitoring, and tracking of the same.

d) Assist the billing department to incorporate adequate changes in its billing procedures and develop online billing mechanism, if it does not exist already.

e) Form Technical and Process Committee to facilitate adequate framework for large scale deployment of rooftop solar in the State.

f) Support stakeholders during implementation of the interconnection framework and address issues and bottlenecks.

g) Assist senior management and utility field officers to ease rooftop solar deployment.

h) Facilitate training of field officers on rooftop solar.

i) Assist and act on the directions under these Regulations.

1.4. Reporting Requirement

a) The Monitoring Mechanism of distribution licensee(s) shall submit quarterly report to

the Commission and shall also place this information on the distribution licensee(s) website.

i. Total number of applications received;

ii. Total number of applications processed;

iii. Number of applications rejected or on hold with reason(s) of rejection;

iv. Total number of eligible consumers' interconnections at the end of previous quarter;

v. Total kW capacity of eligible consumers interconnected at the end of previous quarter;

vi. Total kWh received by the eligible consumer from the distribution licensee by month and by quarter;

vii. Total kWh of solar energy generated by the eligible consumer by month and by quarter;

viii. Total kWh delivered by the eligible consumer to the distribution licensee as per the billing cycle and by quarter;

ix. For each eligible consumer interconnection:
   a. Solar technology utilized;
   b. Gross power rating;
   c. Geographic location; and
   d. Date of interconnection.

Format 1
Application form for connectivity of Rooftop Solar Photovoltaic (RTSPV) System
(To be submitted by Applicant)

Application Form Number_____(To be filled by DISCOM)

To

The Executive Engineer

_____(Distribution Licensee Name)

_____(Name of the Division)

(Name / Address of office)

Date:

I / we herewith apply for a renewable energy Net/ Gross metering connection at the existing service connection for RTSPV system. The details are provided below.

S. No.	Particulars	Details of the Applicant
1.	Name and Address of Consumer/Applicant (with site address)	Name Father's Name Address
2.	Consumer No. (A/c. No.) (Owner of the premises)	
3.	Category (Domestic/ Non-Domestic/ Commercial/Industrial etc. specify) (Owner of the premises)	
4.	Aadhaar Number	
5.	Telephone number	
6.	Email Address	
	Details of the Existing Connection	
7.	Sanctioned Load/ Contracted Demand (kW/ kVA/ HP)	
8.	Existing Connectivity Voltage (Single Phase LT/ Three Phase LT/ Three Phase HT)	

S. No.	Particulars	Details of the Applicant
	Details of the Proposed System	
9.	Capacity of RTSPV system proposed to be connected (kW	

Certification

I hereby state that the information provided above is best and true to my knowledge.

Date: **Signature of Eligible Consumer/ Authorized Signatory**

Place:

Documents to be submitted along with the application form:-

1. Certificate of Authorized Signatory, if other than domestic Applicant.
2. Papers establishing ownership of premises where RTSPV System is being installed
3. Copy of **Latest** electricity bill
4. Mode of payment- Online (NEFT/RTGS/Credit Card/Debit Card) – to be adjusted in bill
5. Copy of Aadhaar Card

Note:

***Only the person who has the service agreement with the appropriate DISCOM can avail the RTSPV metering connection. If the agreement is not in the name of the Applicant, then the Applicant must undertake Change of Tenancy with the appropriate DISCOM before applying for metering connection*.**

Related Instructions and Terms & Conditions for Submission of Format 1

Instructions:

1. The filled-in application along with the necessary documents shall be submitted to concerned Division office,_____DISCOM.
2. The application fees (non-refundable) of INR shall be payable in Cash / DD / Online (NEFT/RTGS) / adjusted in the bill.
3. It is recommended that the Applicant select a system installer to install the RTSPV System who is an empanelled contractor with Ministry of New and Renewable Energy (MNRE), Govt. of India and/ or State Nodal Agency (SNA). The list of the same is available on the website of MNRE and SNA
4. For RTSPV system size of more than ---------- kWp (as per the State's regulations), the inspecting officer of the Electrical Inspectorate, State Government shall inspect and issue a Safety Certificate for commissioning.
5. For RTSPV system size of less than ---------- kWp, the consumer will submit a safety certificate issued by chartered engineers circulated vide circular no._____, or any other authority or self-certified, as per the regulations of the respective State.

General Terms and Conditions:

1. The premise must have easy access for inspection, metering and other necessary checks.
2. The Applicant should be the owner of the property or an authorized person of the owner organization or third party, as the case may be. If the property is in the name of the Company, Trust, Co-operatives / partnership firms, then authorization shall be assigned to a person for correspondence, paperwork, execution of various agreements, etc. The board / management of the organization must authorize such person. In case of partnership firms, the authorized signatory must be one of the partners, to whom written consent has been given by the other partners.
3. The suggestive format for authorization certificate can be downloaded from the website or from Consumer Information manual. This authorization certificate must be submitted to the DISCOM office at the time of submitting the interconnection agreement signed by the authorized person.
4. Application is not transferable.
5. DISCOM shall not be held responsible for any legal disputes between the Applicant and RTSPV installer arising out of the contract.
6. The proposed capacity of the RTSPV system shall be in-line with the provisions of the appropriate supply code and Regulations of HERC, as amended from time to time, for permitting consumer connections.

Format 1(a)
Authorization Certificate
(To be submitted by the Applicant, in case applicable)

(For the application registered for installation of renewable energy system under net/ gross metering program on behalf of a Trust / Committee / Housing Society etc.)

Date: _____

We,_____(Name of Trust / Company / Committee / Housing Society, etc.), residing at _____ _____Pin:_____ wish to participate in the on-going net/gross metering plan for installation of RTSPV system initiated by DISCOM and we accept all the terms and conditions mentioned in the application form and any other formats laid down by DISCOM for this purpose.

Mr./Ms. _____ (Name of Official /Person), residing at _____ is hereby mutually authorized to accept on our behalf, all the terms and conditions of the RTSPV net/ gross metering program regarding installation and commissioning of RTSPV system mentioned under the Application form or any other format prepared in this behalf by DISCOM and to execute such documents, agreements and other writings as may be necessary or required for this purpose

Further, the above authorized person namely Mr./Ms _____ _____(Name with Contact Number) is also nominated as the contact person on our behalf for any matter relating to the Installation, Operation and Inspection of RTSPV system.

Signature/ Name of authorized person/ organization
(With Stamp)
Designation of authorized person

Name of the signing officer
Designation of the signing officer

Format 1(b)
Acknowledgement Slip
(Manual / Automated response by the DISCOM)

S. No.	Particulars	Remarks
1.	Application Number	
2.	Name of the Applicant	
3.	Consumer Number	
4.	Rooftop Solar PV Plant Capacity (kW)	
5.	Application fees details – Receipt number and date	
6.	Application is complete in all respects and all details provided (Yes/No)	

Name of Officer

Signature

Seal

(Designation of Officer)
(To be specified at the time of signing)

(Acknowledgement Form will be a system generated mail and SMS. This will be issued immediately once the Applicant has filled his/ her application online. The acknowledgement email/ SMS will contain the information listed out above).

Format A

Technical Feasibility Report

(To be filled by Sub Divisional Engineer, DISCOM)

S. No.	Particulars	Details
A.	**Details of the Applicant**	
1.	Application Number	
2.	Name of the Applicant	
3.	Address of Applicant	
4.	Phone/ Mobile Number	
5.	Email	
6.	Category (Please tick ✓)	Domestic Non-Domestic Industrial/ Commercial Others (please specify)
7.	Type of connection (Please tick ✓)	1 Phase LT 3 Phase LT 3 Phase HT
8.	Sanctioned Load (kW/ kVA/ HP) Contract demand (kVA)	
B.	**Details of the Distribution Transformer (DT)**	
9.	Location and Transformer no./ Asset Code	
10.	Capacity of DT (kVA)	
11.	RTSPV system capacity proposed under this application (kW)	
12.	Whether the transformer capacity is adequate as per HERC applicable Regulations and whether the consumer can go ahead forinstallation of system for the proposed capacity (Please tick ✓)	Yes No Yes, but with reduced capacity of ---------

I hereby certify that the above said RTSPV System is technically feasible/ not feasible/ feasible with --.....capacity.

Signature
Name of Authorized Person and Designation
Name of the DISCOM
Date

Format 2
Letter of Approval (LoA) for Consumer with respect to the Application for Net/ Gross Metering and Grid Connectivity of Grid Connected Rooftop Solar PV System
(To be filled by the DISCOM)

Date

To
(Applicant's name)_____
(Consumer No.)_____

Ref: Your Application no._____dated _____

With reference to above-mentioned Application number, after the technical feasibility (Format A attached), approval is provided for installing RTSPV system of_____kW in your premises.

Following are the terms and conditions for installing the system:

1. It is recommended that you select an empanelled system installer of your choice to install the RTSPV system. A list of empanelled installers of grid-connect PV systems by MNRE (Ministry of New and Renewable Energy, Government of India) / HAREDA is available.

2. All components of RTSPV system must comply with applicable BIS/IEC standards. Please find attached a list of standards to be complied with attached with this approval letter.

3. You must submit the copy of Manufacturers Test Certificates for all components for having complied with relevant BIS/IEC standards of the selected model along with work completion report.

4. In case of any changes required at your premises due to this proposed installation, these shall be performed by you at your own cost.

5. The grid connectivity of the system shall be in accordance with the HERC applicable Regulations any amendments thereof from time to time and shall confirm to requirements of State Government's Solar Policy.

6. In case the Applicant desires to purchase the Net/ Gross meter on its own (with prior permission from DISCOM), the same shall be purchased from DISCOM approved vendors (as per DISCOMs approved technical specifications). These meters shall be successfully tested from DISCOM or their authorized laboratory. The DISCOM shall fix this meter on receiving system test and safety certificate from CEI/EI (only applicable to RTSPV systems of more than xx kW/ kVA in size) during synchronization. For system size less than xx kWp/ kVA, the consumer needs to submit safety certificate issued by a chartered engineer, or any other certificate, applicable as per the State's Regulations.

7. All the safety measures and standards of the installed system must comply with requirements as stated in CEA/HERC Regulations and all standards referred to in those Regulations.

8. Please submit the following documents after installation of RTSPV system:
    a. Inspection Report by Chief Electrical Inspector/ Electrical Inspector, State Government, safety certificate issued by Chartered Engineer, as applicable;
    b. Work Completion Report in provided format;
    c. Test Certificate of Net/ Gross meter from DISCOM approved laboratory, if applicable;
    d. Copy of signed Net/ Gross Metering Interconnection Agreement.

This approval is valid for 180 days from the date of issuance of letter and the RTSPV system is to be commissioned within this period, failing which the approval will stand cancelled.

You may download all technical specifications, standards and other requirements of the solar rooftop system from_____(link to website of documents download)

Signature of Officer

Name and Designation of the Authorized Officer

Date

Stamp

Format 2(a)
Intimation on deficiency scrutinized in the Application
(To be filled by DISCOM)

To

Name of the Applicant _____
Date _____

Ref: Your Application no._____dated _____

Subject: Intimation for Removal of Deficiency

This is to inform you that we have received your above-mentioned Application and after the technical feasibility of the RTSPV system (Format A attached), DISCOM have found that the Application is not complete, because of the under-mentioned reason:

Please complete the above query within 15 days of receipt of this letter. In case you have not completed the formality within the given period, your Application shall stand cancelled and paid fees, if any, shall not be refunded.

Furthermore, it is found that due to above-mentioned constrains it is not feasible for the DISCOM to provide connectivity at all/ up to the applied capacity (tick appropriate). However, the connectivity is feasible for a reduced capacity of_kW.

Based on this communication, the Applicant can:

1. Accept the connectivity at reduced capacity and approach the DISCOM (Division Office) to process the case; Or
2. Withdraw the Application.

Signature of Officer

Name and Designation of the Authorized Officer

Date

Stamp

Format 2(b)

Response of Applicant for Removal of Deficiencies as intimated after the technical feasibility

(To be filled by Applicant)

To

The Executive Engineer
_____(Distribution Licensee Name)
_____(Name of the Division)
_____(Name / Address of office)

Date:

Subject: - Response of deficiencies found after technical feasibility (Form 2(a))

With reference to the DISCOM's letter (Form 2(a)), dated_____, regarding the intimation on deficiencies found in the Application/ operational constraints to provide connectivity at the applied capacity.

The Applicant will exercise the following option (tick the appropriate choice):

Applicant/ Consumer Response ((Please tick ✓)

1. I have incorporated the mentioned deficiencies in the Application Form.

2. I accept the connectivity at reduced capacity as intimated by the DISCOM vide letter dated_____and request the DISCOM to process the case.

3. I withdraw my Application.

Name and Signature of Applicant:

Application Number:

Format 2(c)

Intimation for Non-Feasibility and Termination of the Application
(To be filled by DISCOM)

To

Name of the Applicant _____

Date _____

Ref: Your Application no._____dated _____

Subject: Intimation of termination of the Application due to non-feasibility/ operational constraints

This is to inform you that we have received your above-mentioned Application and after the technical feasibility of the RTSPV system (Format A attached), DISCOM have found that the Application is not feasible at this stage due to the following reasons:

_____

_____

The Application hereby stands terminated and the Application Fee shall be refunded within 7 days from the date of issuance of this letter.

Signature of Officer

Name and Designation of the Authorized Officer

Date

Stamp

Format 3
Inter-connection agreement (Net/ Gross Metering Arrangement)
Between DISCOM and Applicant

This Agreement is made and entered into at (location)_____on this (date)_____day of (month), (year)_____between

The Eligible Consumer (Name)_____residing at (address) _____as first party

AND

Distribution Licensee_____(herein after called as Licensee) and having its registered office at (address)_____as second party of the agreement.

Whereas, the eligible consumer has taken the responsibility to set up or facilitate the requisite Photovoltaic system and injection system into the Licensee's grid.

And whereas, the Licensee has verified the application and agrees to benefit the eligible consumer for the electricity generated and as per conditions of this agreement and net/ gross metering Regulations.

Both the parties hereby agree as follows:

1. Eligibility

1.1 Eligible consumer agrees that the standards and conditions of his Photovoltaic system meet the norms for being integrated into grid/distribution system and that he shall maintain the system accordingly for the duration of this agreement.

1.2 Eligible consumer agrees that for connection of his Photovoltaic system to Licensee's distribution system, he shall be bound by requirements of state Distribution Code/supply code and/or Licensee's conditionsof service and such connection shall not affect the performance of the grid with specified reliability,security and quality as per the Central Electricity Authority (Grid Standard) Regulations 2010 as amended from time to time.

2. Technical and Interconnection Requirements

2.1 Eligible consumer agrees that the interconnection of the rooftop solar system with the network of the licensee shall be made as per the technical standards for connectivity of distributed generation resources specified under the Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 and subsequent amendments thereof.

2.2 Eligible consumer agrees that he has installed or will install, prior to connection of Photovoltaic system to Licensee's distribution system, an isolation device (both automatic and inbuilt within inverter and external manual relays) and agrees for the Licensee to have access to and operation of this, if required, for repair and maintenance of the distribution system.

2.3 Eligible consumer agrees that in case of a power outage on Licensee's system, photovoltaic system will shut down, unless special transfer and isolating capabilities have been installed on photovoltaic system.

2.4 Eligible consumer agrees that Licensee will specify the interface/inter- connection point and metering point.
2.5 Eligible consumer agrees to furnish all the data such as voltage, frequency, breaker, isolator position in his system, as and when required by the Licensee. He may also try to provide facilities for online transfer of the real time operational data.

3. Safety

3.1 Eligible consumer shall comply with the Central Electricity Authority (Measures Relating to Safety and Electricity Supply) Regulations 2010.
3.2 Eligible consumer agrees that the design, installation, maintenance and operation of the photovoltaic system are performed in a manner conducive to the safety of the photovoltaic system as well as the Licensee's distribution system.
3.3 Due to Licensee's obligation to maintain a safe and reliable distribution system, eligible consumer agrees that if it is determined by Licensee that eligible consumer's photovoltaic system either causes damage to and/or produces adverse effects affecting other distribution systems' consumers or Licensee's assets, eligible consumer will have to disconnect photovoltaic system immediately from the distribution system upon direction from the Licensee and correct the problem at his own expense prior to a re-connection.

4. Clearances and Approvals

4.1 The eligible consumer agrees to obtain all the necessary approvals and clearances (environmental and grid connected related) before connecting the photovoltaic system to the distribution system.

5. Access and Disconnection

5.1 Licensee shall have access to metering equipment and disconnecting devices of photovoltaic system, both automatic and manual, at all times.
5.2 In emergency or outage situation, where there is no access to the disconnecting devices, both automatic and manual, such as a switch or breaker, Licensee may disconnect service to the premises.

6. Liabilities

6.1 Eligible consumer and Licensee will indemnify each other for damages or adverse effects from either party's negligence or intentional misconduct in the connection and operation of photovoltaic system or Licensee's distribution system.
6.2 Licensee and eligible consumer will not be liable to each other for any loss of profits or revenues, business interruption losses, loss of contract or loss of goodwill, or for indirect, consequential, incidental or special damages, including, but not limited to, punitive or exemplary damages, whether any of the said liability, loss or damages arise in contract, or otherwise.
6.3 Licensee shall not be liable for delivery or realization by eligible consumer for any fiscal or other incentive provided by the central government.

7. Commercial Settlement

7.1 All the commercial settlement under this agreement shall follow the HERC applicable Net/ Gross Metering Regulations.

8. Connection Costs

8.1 The eligible consumer shall bear all costs related to setting up of photovoltaic system including metering and interconnection costs. The eligible consumer agrees to pay the actual cost of modifications and upgrades to the distribution facilities required to connect photovoltaic system in case it is required.
8.2 Costs of all interconnection equipment including the isolators, and meters. are also to be borne by the eligible consumer.

9. Termination

9.1 The eligible consumer can terminate the agreement at any time by giving 30 days prior written notice to the Licensee.
9.2 Licensee may terminate the agreement with 30 days prior written notice, if eligible consumer breaches any term of this agreement and does not remedy the breach within 30 days of receiving written notice from the Licensee of the breach.
9.3 Eligible consumer, upon termination of this agreement, shall disconnect forthwith the photovoltaic system from Licensee's distribution system.

In witness, whereof, Mr ..... for and on behalf of (Eligible consumer) and Mr .....for and on behalf of (Licensee) sign this agreement in two originals.

Eligible Consumer/ Third Party
Name:
Address:
Service connection no:
Date:

Distribution Licensee
Name:
Designation:
Office Address:
Date:

Format 4

Intimation of Meter Procurement

(To be filled by Applicant)

To,

_____(Concerned Authority)

_____(Name of the DISCOM)

_____(Date)

Ref: Application No._____dated _____

Dear Sir,

With reference to above- mentioned Application number and receiving the Letter of Approval after the technical feasibility, I/we intend to install_____KWp of RTSPV system vide letter No_____dated _____. In this regards, I/we request DISCOM to provide a meter of class_____for RTSPV installation. The meter shall be as per the Net/ Gross metering clause in Solar Rooftop Policy/Guidelines...

I/We agree to pay fee of INR_____- as mentioned in DISCOM website via online mode/DD _____/ cheque_____.

Name of Consumer/Sign

Assigning Meter (To be filled by the DISCOM)

_____(Name of the Applicant)

_____(Consumer No.)

Ref: Your Application No._____dated _____

1. Net/Gross meter of class_is available/ not available (tick (✓) appropriate) with DISCOM.
2. Appropriate meter will be sent by DISCOM test lab and shall be dispatched on the day of final check and synchronization of RTSPV system with the DISCOM's grid.
3. The DISCOM will issue test certificate to consumer prior to final checks and synchronization of the system. The Consumer has to submit test certificate along with Work Completion Report

Signature of Officer

Name and Designation of the Authorized Officer

Date

Stamp

Note: -

a) Applicant must bring a copy of Letter of Approval.
b) In case meter is not available with DISCOM it can be procured from external agency
c) If meter is procured from outside agency, a letter intimating Meter No., Class and other specifications described as per CEA regulations, - shall be submitted to the DISCOM.

Format 4(a)
Request for Meter Testing
(To be filled by Applicant)

Date:

To

_____(Concerned Authority)

_____(Name of the DISCOM)

Ref: Application No._____dated _____

Dear Sir,

With reference to above-mentioned Application number and receiving the Letter of Approval after the technical feasibility, I/we intend to install_____KWp of RTSPV system vide letter No_____dated _____. In this regards, I/we have procured the meter from ----------.

As per the clause_____of meter testing of Solar Rooftop Policy/Guidelines, I request DISCOM to kindly test meter of specification ---------- --.

I/We agree to pay fee of INR_____as mentioned by the DISCOM for testing of meter through online mode/ DD_____/ cheque_____.

Name of Consumer/Signature

Application number

Format 4(b)

Intimation regarding Completion of Testing of Meter for Installation with RTSPV System

(To be filled by DISCOM)

_____(Name of the Applicant)

_____(Consumer No.)

Date

Ref: Application No._____dated _____

Dear Sir,

With reference to the above-mentioned Application number and your letter dated_____, regarding testing of meter, hereby inform you that your meter with specification _____is tested. The same will be installed after the synchronization check of the system.

Signature of Officer

Name and Designation of the Authorized Officer

Date

Stamp

Format 5
Work Completion Report
(To be submitted by the Applicant)

To,

The Chief Electrical Inspector/ Electrical Inspector.....(Control Area)
State Government (*if RTSPV size is more than ------ KVA)*

CC: Office of (Concerned) Executive Engineer , DISCOM

CC: State Nodal Agency, in case of subsidized consumers- -

Sub: Submission of work completion report

Dear Sir,

This is in reference to my Application number_____dated____for installation of RTSPV system, I/ We hereby confirm you that I/ we have completed the work of installation of the RTSPV system of capacity _____ and submit the following basic information for your perusal and request you to inspect the system.

S. No.	Particulars	Information
A.	**Details of the Solar PV module**	
1.	Model No.	
2.	Name and address of manufacturer	
3.	Capacity of each Module (Wp)	
4.	No. of Modules	
5.	Total Capacity (kWp)	
6.	Date of Installation	
7.	Applicable Standard (BIS/IEC)	
B.	**Details of the Inverter**	
8.	Name and address of the inverter manufacturer	
9.	Brand Name of the inverter	
10.	Model No.	
11.	AC capacity of individual inverter (kW)	
12.	No. of inverters installed	

S. No.	Particulars	Information
13.	Total AC capacity of inverter (kW)	
14.	Serial Nos.	
15.	Date of Installation	
16.	Applicable Standard (BIS/IEC)	
C.	**Details of the Cables: DC**	
17.	Make / Name of manufacturer	
18.	Size & Type	
19.	Applicable Standard (IEC)	
D.	**Details of** the **AC wiring**	
20.	Make / Name of manufacturer	
21.	Size & Type	
22.	Applicable Standard (IEC)	
E.	**Details of the DC distribution box**	
23.	Make / Name of manufacturer	
24.	Sl. No.	
25.	DC Surge Protection Device	
26.	MCB /Isolator quantity & capacity	
27.	Size & Type	
28.	Applicable Standard (IEC)	
F.	**Details of the AC distribution box**	
29.	Make / Name of manufacturer	
30.	Sl. No.	
31.	AC Surge Protection Device	
32.	MCB /MCCB quantity & capacity	
33.	Size & Type	
34.	Applicable Standard (IEC)	
G.	**Details of the Earthing***	
35.	Earth resistance (shall be less than 2 ohms)	

S. No.	Particulars	Information
36.	Size of the Earth wire / flat*	
37.	Two separate Earthing points Modules & DC Surge arrester Inverter, AC Surge protection device & Lightening Arrester	 Yes / No Yes / No
38.	Size & Type	
39.	Applicable Standard (BIS/IEC)	
	**Note: ***Earthing shall be done in accordance IS 3043-1986, provided that Earthing conductors shall have a minimum size of 6 mm^2 copper wire or 10 mm^2 aluminium wire or 3 mm^2 X 70 mm^2 hot dip galvanized steel flat.	
H.	**Details of meter, if purchased by consumer (please enclose the test report of the meter tested at the laboratory of the DISCOM)**	
40.	Make	
41.	Serial No.	
42.	Capacity	
43.	Type / Model	
44.	Single ph./Three ph.	
45.	CT Ratio	
46.	Date of Test by MT, DISCOM	
47.	Applicable Standard (BIS/IEC)	
I.	**Details of the Caution signage**	
48.	Caution Signage	
J.	**Provision of manual and automatic switches: Yes / No**	
49.	Manual/ Automatic Switches	
K.	**G.P.S. Co-ordinates of the RTSPV System Installation**	
50.	Latitude/ Longitude	
L.	**Operation and Maintenance**	
51.	Whether Operation and Maintenance Manual provided to the consumer: Yes/ No	

Standards Certificate/Standard Number BIS / IEC / etc. to be mentioned, wherever applicable

Certification:

I/ We Certify that the above said RTSPV system is installed and the equipment used in the system comply the Technical and Safety standards as specified in the regulations notified by the MNRE/ CEA/ HERC/ DISCOM, for the net/ gross metering of RTSPV systems.

Signature of the Applicant

Name and Address with Seal

Name:_____

_____

Date:_____

Name and Signature of the System Installer

Name of the firm and address:

_____

Date: _____

Enclosures:

1. Test report of net/gross meter tested at the laboratory of the DISCOM.
2. Copy of the IEC/IS Test certificates of PV modules, Inverter, Cable etc.
3. Data sheets/Drawing for the array mounting System.
4. Actual Single line wiring diagram (SLD) of the SPV System.
5. Copy of Maintenance & Operation information manual provided by the System Installer
6. Copy of Interconnection Agreement

Format 6
Acceptance/ Rejection of Work Completion Report and Grid Synchronization Check

(To be filled by DISCOM)

To

_____(Name of the Applicant)
_____(Consumer no.)

Date: _____

Ref: Your Application no._____dated _____

Subject: Intimation of Acceptance/ Rejection of Work Completion Report and Grid Synchronization Check

This is in reference to your Application number_____, it is hereby inform you that this office has received your work completion report for the installed RTSPV system. Subsequent to that Grid Synchronization Check of the RTSPV system (Format B attached) installed on the roof of your premises _____, was done.

In response, the DISCOM confirms (Please tick ✓) -.

a. Acceptance of work completion report and grid synchronization check
b. Rejection of work completion report and grid synchronization check

The report is rejected due to the following issues

- _____

After incorporating the above-mentioned queries, please inform within 15 days from the receipt of this letter. In case the revised report will not be submitted in the given period, your application shall be cancelled and paid fees, if any, shall not be refunded.

Signature of Officer

Name and Designation of the Authorized Officer
Date

Stamp

Enclosure: Format B

Format B

Guidelines for pre-commissioning check before and after connecting the RTSPV system with DISCOM Network and steps for maintenance of network where such connectivity exists

(For DISCOMs internal purpose only)

1. Mandatory safety precautions / features:

The following are mandatory safety precautions, which shall be taken care, before and after commissioning of grid connected Solar PV system.

(a) An inbuilt Inverter relay which trips on DISCOM supply failure and prevent any solar power injection to the DISCOM Network when there is no power from DISCOM. The anti-islanding protection shall be tested during the release of connection.

(b) The Solar PV system should be separately grounded / earthed. A minimum of two Separate dedicated and interconnected earth electrodes must be used for the earthing of the PV system support structure, with a total earth resistance not exceeding 5 ohms.

(c) Lightning Arrestor also must be provided for SPV.

(d) Manual isolator switch at an easily accessible location with locking facility shall be provided.

(e) Caution Stickers shall be used with the green background and the text “Solar PV Systems” written in white letters. The size of these stickers shall be 10 CM (width) x 7 CM (height) with the text clearly printed in the centre of the sticker. (applicable to only 50 kW and above)

(f) All SPV consumers should have a mandatory sign board fitted near the existing meter reading terminal stating that ‘This service is fitted with a LT grid connected SPV plant”. The Solar PV system Caution Stickers shall be fixed at the following locations. (applicable to only 50 kW and above)

i. On or near to meter of service with grid connected solar PV system;

ii. On the Consumer main switch, of a service connected with a grid connected Solar PV System;

iii. On LT poles with grid connected Solar PV Systems at height of about 1.50 meter from the ground;

iv. On LT feeder pillars with grid connected Solar PV System on the street-facing door of the feeder pillar.

v. On each of the LT take off poles of a Distribution Transformer to which Solar PV Systems are connected.

vi. On substation end of HT feeder having Solar PV System.

vii. A List of serviced connections of grid connected Solar PV Systems shall be available at the Division office and 33/11 KV S/S.

viii. A record may be maintained at the Division office of each SPV plant commissioning date and other details.

ix. The SPV connected details of pole / pillar box /DT/ SS feeder end wise may be maintained at Division office.

(g) During planned / forced maintenance work on DISCOMs network, before taking up the work in hand, besides ensuring all other provisions such as line earthing, de-energisation of the line section where

the work is to carried out as per prevailing norms further it should be ensured that supply from such small solar roof-top PV power plants are not back feed and supply should also be disconnected by manual isolating switch with locking facility installed in the premises of such consumers and ensuring proper earthing.

2. The Check List before release of connection.

a) Component Inspection Checklist:

Sr. No.	Item type	Yes	No
1	Installation Layout – is it as per drawing? (Applicable only for 50 kW above)		
2	Inverter IS/ IEC standards qualified		
3	PV panel IS / IES standards qualified		
4	PV isolators / PV cables IS / IES standards qualified		
5	AC disconnect manual switch provided with locking arrangement		

b) Grid connected Functional Safety Checklist:

Sr. No.	Item type	Yes	No
1	Check whether solar generation stops automatically when DISCOM supply made off (inverter/PCU cut off)		
2	Bi-directional flow recorded on Net meter		
3	Solar Generation meter Ok?		
4	Check all Earthing points as per standard		
5	Solar and Uni/Bi-directional meter as the case may be tested & sealed by DISCOM meter testing lab		
6	Check whether manual Isolating switch is installed at accessible location		
7	Check whether manual Isolating switch stops feeding supply in DISCOM network when in OFF position		

Format 7
Letter of Synchronization
(To be filled by the DISCOM)

To,
_____(Name of the Applicant)
_____(Consumer No)

Date

Ref: Your Application No._____dated _____

Sub: Completion of 1. Synchronization with the DISCOM Grid; 2. Installation of Meter(s); and 3. Commercial Date of Operation

Dear Sir

This is with reference to your above-mentioned Application number, synchronization test of RTSPV system of ……. kWp, installed on the roof of your premises (address), has been conducted and your RTSPV system found satisfactory and successfully synchronized with the DISCOMs grid on dated …….

Signature of Officer

Name and Designation of the Authorized Officer
Date

Stamp

Annexure 1

Solar Rooftop Photovoltaic Systems Application Register

(To be filled by DISCOM and maintained at sub-division level)

S No	Application		Name of Consumer	Consumer Number	Sanction Load/ Contract Demand (kW/ kVA/ HP)	Proposed RTSPV System Project Capacity (kWp) Name of the Applicant	DT Details	Technical Feasibility Report	Registration		Date of Agreement with the DISCOM	Chief Electrical Inspector/ Electrical Inspector Approval (if applicable)		Commissioning Approval		Date of Commissioning &Synchronize	Remarks	Wait list Rank
	Number	Date					Available Capacity		Number	Date		Number	Date	Number	Date			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		