Jaipur Vidyut Vitran Nigam Limited
Office of the Superintending Engineer (Regulation)
Room No. 149, Old PowerHouse Premises, Banipark, Jaipur-302016
Email- xendsm@jvvnl.org, Website: www.energy.rajasthan.gov.in/jvvnl
CIN: U40109RJ2000SGC016486

प्रभास्मि शशि सूर्यायः

No: JPD/SE(Regulation)/XEN(DSM)/F./D. 681 Dated: 07.10.2022

ORDER

Sub: Procedural guidelines for registration of vendors for processing applications under Nation Solar Portal of MNRE under Phase II of Grid Connected Rooftop Solar Programme.

1) Ministry of New and Renewable Energy (MNRE) on10.06.2022 issued Simplification of procedure Rooftop Solar Programme (RTS) Phase-II vide F. No. 318/6/2022-GCRT wherein the Ministry launched the National Portal for Rooftop Solar i.e. solarrooftop.gov.in wherein interested consumers across the country can submit online application for getting rooftop solar system installed from the empanelled vendors of respective states.

2) Detailed guidelines issued by MNRE in this regard are enclosed as **Annexure I**.

3) For this purpose, vendors/firms willing to get empanelled for processing applications registered on the National Portal for Rooftop Solar need to submit their application with required documents to concerned DISCOM.

4) In this context, it is to apprise that any interested vendors / firms need to submit following list of documents at the office of undersigned so that a list of such vendors / firms can be made available on the National Portal for Rooftop Solar for consumers:

   (i) **Application form**in prescribed format (**Annexure-II**) in the form of declaration from the vendorcontaining details such as Vendor's /Firm's name, office address, GSTIN/PAN, contact details, etc with seal & signature

   (ii) **Self-Attested copy of valid Electrical Contractor License** of Class "A" / "B" / "C" issued by Govt. of Rajasthan

   (iii) **Performance Bank Guarantee (PBG)** of amount Rs.2,50,000(Rupees Two Lakh Fifty Thousand Only) valid for at least 5 (five) years (PBG format as per **Annexure-III**).

5) The vendors currently empanelled with the beneficiaries' DISCOM through tendering process under RTS Programme Ph-II will be considered as empanelled vendors for this purpose subject to deposit of PBG amount i.e. Rs. 2.50 lakhs valid for 5 years and valid electrical contractor license issued by Govt. of Rajasthan. Other vendors willing to register/empanel themselves in the Programme under simplified procedure may get themselves registered with the consumers' DISCOM by submitting an application and depositing a PBG of Rs. 2,50,000/- (Rupees Two Lakh Fifty Thousand only) valid for at least five years.

6) The DISCOM will notify the registered/empanelled vendors on its website for information

of residential consumers and update the same every month.

7) All empanelled vendors / firms for National Portal for Rooftop Solar shall mandatorily need to ensure compliance of applicable CEA / MNRE / JVVNL regulations / technical specifications at all times including but not limited to following:

   (i) Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010 and amendments thereof

   (ii) Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Amendment Regulations, 2019 and amendments thereof

   (iii) Central Electricity Authority (Measures relating to safety and electric supply) Regulations, 2010 and amendments thereof

   (iv) Central Electricity Authority (Installation and Operation of Meters)Regulations, 2006 and amendments thereof

   (v) Rajasthan Electricity Regulatory Commission (Grid Interactive Distributed Renewable Energy Generating Systems) Regulations, 2021 and amendments thereof (**Annexure-IV**)

8) JVVNL reserves the rights to withdraw the vendor registration, in case of any default or poor performance observed during period of contract by the empanelled vendor / firm.

9) Registration/ empanelment of vendors will be valid initially for one year from the date of empanelment and can be renewed thereafter on yearly basis.

Enclosures: As above

27/10/22

(Umesh Gupta)
Addl. Chief Engineer (PPM), JVVNL

Copy submitted / forwarded to the following for information & necessary action:

(i) The Zonal Chief Engineer, Jaipur Zone / Bharatpur Zone / Kota Zone, Jaipur / Bharatpur / Kota with advise to get the this order displayed at the Notice Board of respective Circle / Division / subdivision office(s).

(ii) The Superintending Engineer (IT), JVVNL, Jaipur for hosting of this order at Nigam's website (http://energy.rajasthan.gov.in/jvvnl) with all enclosed documents.

(iii) The TA to Chairman Discoms, Jaipur

(iv) The TA to MD JVVNL, Jaipur

(v) The TA/PS to Director(Technical /Finance) JVVNL, Jaipur

(vi) The Accounts Officer (PPM) JVVNL, Jaipur.

Addl. Chief Engineer (PPM), JVVNL

Annexure-I

F. No. 318/6/2022-GCRT
Government of India
Ministry of New and Renewable Energy

Block No. 14, C.G.O Complex,
Lodhi Road, New Delhi-110003
Dated 10 June 2022

Office Memorandum

Subject: Simplification of Procedure - Rooftop Solar Programme Ph-II.

This is in continuation of this Ministry's OM of even no. dated 02.02.2022, vide which simplification of procedure for installation of residential grid connected rooftop solar plants was conveyed.

2. In this regard, a National Portal, www.solarrooftop.gov.in, is being designed and will be launched soon. The process for installation of rooftop solar plants, starting from registering the applications to release of subsidy in residential consumers' (beneficiaries') bank account after installation and inspection of plant, can be tracked online at the national portal.

3. In order to protect the interests of beneficiaries and ensure that the vendors installing the rooftop solar plants have the requisite expertise, follow minimum specifications and standards specified by the Ministry and maintain the plant for at least five years from the date of installation, it has been decided that such vendors have to register/empanel themselves with the beneficiaries' Distribution Utility (DISCOM).

4. The vendors currently empanelled with the beneficiaries' DISCOM through tendering process under RTS Programme Ph-II will be considered as empanelled vendors for this purpose. Other vendors willing to register/empanel themselves in the Programme under simplified procedure may get themselves registered with the consumers' DISCOM by submitting an application along with declaration (as per Annexure) and depositing a PBG of Rs. 2,50,000/- (Rupees Two Lakh Fifty Thousand only) valid for at least five years. The vendors can submit the application at the Division/Circle level and the name of the vendor will be included in the list of registered/empanelled vendors within a period of one month from the date of submission of the application. Registration/empanelment of vendors will be valid initially for one year from the date of empanelment and can be renewed thereafter on yearly basis. The DISCOM will notify the registered/empanelled vendors on its website for information of residential consumers and update the same every month.

5. The registered/empanelled vendor selected by the beneficiaries will conduct the physical survey to assess the RTS capacity and guide the beneficiary on the RTS capacity that can be installed in the beneficiary's premises considering technical and financial parameters. The vendor shall also provide assistance to the beneficiary in getting necessary approvals, installing the net-meter and facilitating inspection by the DISCOM.

6. In case of any misleading information is provided by any vendor or conditions mentioned in the declaration are not met, the DISCOM will take action against the registered/empanelled vendor including blacklisting and forfeiture of PBG.

7. The subsidy available under the simplified procedure will be the same for beneficiaries all over the country. The rates of subsidy will be notified for each calendar year and will be applicable for all beneficiaries who have registered their application on the national portal during the calendar year.

8. This issues with the approval of competent authority.

(J.K Jethani)
Sr. Director/ Scientist 'F'

To

1. ACS/ Principal Secretary (Renewable Energy/Energy/Power), all States/UTs
2. Secretary, all SERCs/JERCs
3. CMD/MD/CEO, all DISCOMs
4. Electricity Departments of Arunachal Pradesh/Nagaland/Mizoram/Sikkim/UTs
5. NIC, MNRE – for uploading on MNRE website and National Portal for Solar Rooftop.

Annexure

Format of Declaration from vendor

1. Name of the Firm_____
2. Legal status of the Firm (Ltd/Pvt/Proprietary/Partnership/LLP) _____.
3. GSTIN number of the Firm_____
4. PAN number of the Firm_____.
5. Provident Fund number of the Firm (if applicable) _____
6. The Firm has sufficient (at least three) technical manpower trained in the skills required to execute the work of installation of rooftop solar plants.
7. The Firm fulfils all statutory requirements, for example those relating to electrical safety, to install rooftop solar plants.
8. The Firm will install rooftop solar plants fulfilling minimum technical standards and specifications issued by the MNRE.
9. The Firm will provide comprehensive maintenance of the rooftop solar plant installed by the Firm for at least 5 years.
10. The Firm will provide all necessary information related to installation of rooftop solar plants and Do's and Don'ts to the beneficiary.
11. The Firm will also provide name, contact number and e-mail of the person where the beneficiary can register a complaint related to rooftop solar plants installed by the Firm. This details will also be made available to the State authorities and MNRE.
12. In case of any discrepancy in terms of quality and services provided by the Firm, the concerned distribution company/Electricity Department can blacklist the Firm and encash the performance bank guarantee, apart from taking other legal actions.
13. The signatory of this declaration is authorised by the Firm and the Firm will abide by all the conditions mentioned above. In case of any misinformation or concealment of facts, appropriate legal action may be taken against the Firm by the affected parties.
14. Along with this declaration, the Firm is submitting a performance bank guarantee of Rs. 2.5 lakh valid for five years.
15. The Firm is willing to work in urban/rural areas of _____, _____, (name of districts).

Authorised Signatory
Name: _____
Designation: _____
Name of the Firm: _____

DRAFT FORMAT FOR PERFORMANCE BANK GUARANTEE (PBG) Annexure-I

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

Ref:
Bank Guarantee No:

Date:
xx.xx.2022

To,

[Insert the name and complete Address of the State Implementing Agency]

In consideration of the [***Insert name and address of the Bidder***] (hereinafter referred to as 'Bidder') submitting the response to Request for Proposal (RfP) inter alia for selection of the Project in response to the RFP No. [***Insert the NIT No of Tender***] dated [***Insert the Date of issuance of RfP***] issued by the **[*Insert the name of Implementing Agency*]** (hereinafter referred to as_____) and considering such response to the RFP (if applicable) of [***insert the name of the Bidder***] as per the terms and conditions of the RFP and amendments, the [***insert name & address of Bank***] hereby agrees unequivocally, irrevocably and unconditionally to pay to [***Insert the name of Implementing Agency***] at [***Insert the complete Address of Implementing Agency***] forthwith on demand in writing from [***Insert the name of Implementing Agency***] or any Officer authorized by it in this behalf, any amount upto and not exceeding **Rs. 2,50,000/- (Rs. Two Lakh Fifty Thousand only),** on behalf of M/s. [***Insert name of the Bidder***] .

This guarantee shall be valid and binding on this Bank up Five (05) Years from date of issuance of the BG and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to **Rs. 2,50,000/- (Rs. Two Lakh Fifty Thousand only).**

Our Guarantee shall remain in force until **[*Insert the Exact Date, completing on 5 Years counting from Date of signing of BG] and [Insert the name of Implementing Agency]*** shall be entitled to invoke this Guarantee till **[*Insert the Exact Date, completing on 5 Years counting from Date of signing of BG]***.

The Guarantor Bank hereby agrees and acknowledges that the ***[Insert the name of Implementing Agency]*** shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by ***[Insert the name of Implementing Agency]***, made in any format, raised at the above-mentioned address of the Guarantor Bank, in order to make the said payment to ***[Insert the name of Implementing Agency]***.

The Guarantor Bank shall make payment hereunder on first demand without restriction or

conditions and notwithstanding any objection by [***Insert name of the Empanelled Bidder***] and/or any other person. The Guarantor Bank shall not require ***[Insert the name of Implementing Agency]*** to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against ***[Insert the name of Implementing Agency]*** in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at **[*Insert the name of City/State*]** shall have exclusive jurisdiction. The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly ***[Insert the name of Implementing Agency]*** shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Bidder, to make any claim against or any demand on the Bidder or to give any notice to the Bidder or to enforce any security held by ***[Insert the name of Implementing Agency]*** or to exercise, levy or enforce any distress, diligence or other process against the Bidder.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to **Rs. 2,50,000/- (Rs. Two Lakh Fifty Thousand only)** and it shall remain in force until **[*Insert the Exact Date, completing on 5 Years counting from Date of signing of BG]*** with an additional claim period of **thirty (30) days** thereafter. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if [***Insert the name of Implementing Agency]*** serves upon us a written claim or demand.

Signature _____

Name_____

For

[**Insert Name of the Bank**]
Banker's Stamp and Full Address.

Dated this ____ day of ____, 20__

(**Bank Contact Details & E Mail ID is to be provide)**

Witness:

1. …… Signature Name and Address	2. …… Signature Name and Address

Note: The DISCOMs can modify this format as per their requirements.

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Annexure-I

F. No. 318/6/2022-Grid Connected Rooftop
Government of India
Ministry of New and Renewable Energy
Block-14, CGO Complex,
Lodhi Road, New Delhi-110003
Dated 2 February 2022

OFFICE MEMORANDUM

Subject: Simplification of procedure - Rooftop Solar Programme Ph-II

This refers to PIB release issued on 21.01.2022 regarding simplification of Rooftop Solar Programme of Ministry of New and Renewable Energy, announcing that the residential consumers will have flexibility to get the rooftop solar plant installed by themselves or through any vendor of their choice.

2. The new simplified procedure will be as follows:

i. A national portal for registering applications from the beneficiary, approval thereof and tracking progress will be developed. There will be a portal in the similar format at the level of the DISCOMs and both the portal will be linked.

ii. The household beneficiary, who wishes to install Rooftop Solar (RTS) under the new mechanism will apply on the national portal. The beneficiary will be required to submit necessary information including details of bank account where the subsidy amount will be transferred. At the time of application, the beneficiary will be informed about the complete process and subsidy amount that can be availed for installation of the RTS plant.

iii. The application will be forwarded online to the concerned DISCOM for issuance of technical feasibility approval within next 15 working days. After the application is transferred to the DISCOM it will also be displayed on the DISCOM portal.

iv. After obtaining technical feasibility, the beneficiary will install the RTS plant from any vendor of his choice by selecting solar modules fulfilling the conditions of DCR and enlistment under ALMM and inverters which are certified by BIS. The list of empanelled vendors will be provided on the portal. In order to ensure quality and post installation services, MNRE will issue standards and specifications for RTS plant and a format of agreement to be executed between beneficiary and the vendor. The agreement among other terms and conditions will have the provision to ensure that the RTS plant installed meets safety and performance standards and that the vendor would maintain the plant for next 5 years or higher period as per terms of the agreement.

v. The beneficiary has to install RTS plant within a specified period otherwise his application will be cancelled and he has to re-apply for installation of RTS plant.

vi. Upon installation of RTS plant, the beneficiary will apply for net-metering on the national portal, which will be forwarded online to the concerned DISCOM. The concerned DISCOM will either procure and install the net-meter or it will advise the beneficiary to procure the net-meter as per prescribed specifications and get it tested from the DISCOM authorized lab. The decision of the DISCOM will be posted on the portal.

vii. After installation of the net-meter, the DISCOM officer will submit a commissioning and inspection report on the national portal, which will also be reflected on the DISCOM portal.

viii. On receiving the inspection report, the subsidy will be released directly in the bank account of the beneficiary by the DISCOM.

ix. The whole process will be monitored and a grievance redressal mechanism will be put in place.

3. It is expected that the national portal will be developed in about six to eight weeks. Till the national portal comes into operation, the existing procedure for availing subsidy for installation of rooftop solar plant through DISCOMs will continue and will be the only authorized procedure to avail subsidy from MNRE. After the National portal set up, the beneficiary will have the choice of installing RTS availing either of the options.

4. The general public may be advised not to trust any misleading/spurious information being published on websites/social media particularly asking for registration fee or other payment for getting Government of India subsidy for installation of rooftop solar plants. Authentic information in this regard will be made available on the official website of Ministry www.mnre.gov.in or on SPIN portal www.solarrooftop.gov.in.

(J K Jethani)
Sr. Director/Scientist-F

To

1. ACS/Principal Secretary (Energy/Power/Renewable Energy), all States/UTs
2. Secretary, all SERCs/JERCs
3. CMD/MD/CEO, all DISCOMs
4. Electricity Departments of Arunachal Pradesh/ Nagaland/ Mizoram/ Sikkim/UTs

Ministry of New and Renewable Energy
Rooftop Solar Division

Process for installation of Rooftop Solar system at residential house under simplified procedure

The applicants willing to install rooftop solar system under simplified procedure will be required to apply through National Portal. In order to register at National Portal the applicant will require an active mobile number and an active e-mail id. The applicant will also have to download SANDES APP for received OTP.

The entire process has been explained in the following steps.

Step-1: Download SANDES app and register on the National Portal by selecting the local Distribution Company or Electricity department, as the case may be, referred as DISCOM, and enter Electricity connection number / Consumer number (mentioned in electricity bill), email id and mobile number. The registration process involves OTP authentication of mobile number and activation through email id. While sending activation link on email, the entire procedure will also be communicated to the applicant.

Step-2: After successful registration the applicant can proceed for submitting application for installation of grid connected rooftop solar system at residential house. The information already entered at the time of registration will be prefilled in the application form and the applicant will have to enter details such as, name on electricity bill, address, capacity of proposed rooftop solar system and details of existing rooftop solar system capacity installed, if any. The applicant also has to upload copy of latest electricity bill. On submission of application, the applicant will get a copy of application on email and it can also be downloaded after login to the portal.

Step-3: Application will be forwarded to the DISCOM for technical feasibility approval as per prevailing regulations. The applicant is advised to initiate installation of the rooftop solar system only after getting the feasibility approval from DISCOM. The technical feasibility approval or rejection, as the case may be, will be informed to the applicant through email.

Step-4. On receipt of feasibility approval from DISCOM, the applicant can proceed to install rooftop solar system. It is mandatory to get the rooftop solar system installed from any of the vendor registered/empanelled with DISCOM. Ministry has specified minimum technical specifications and standards for rooftops solar systems, which are to be followed. The applicant will have the option to choose equipment of higher quality/efficiency. The domestically manufactured solar modules using domestically manufactured solar cells listed in the ALMM should only be used by the applicant. In addition, the inverter should also be BIS certified. In order to protect the interest of the applicant an agreement to be signed between applicant and the vendor and a model format of the agreement is available on National Portal under **Help Document** section. It is mandatory for the vendor to provide comprehensive maintenance of the rooftop solar plant installed by the firm for at least 5 years.

Step-5: On completion of installation of rooftop solar system, the applicant has to submit project completion details for net-metering and approval (The project completion details will include wattage, make and numbers of solar modules, make and wattage of inverter, name of vendor that has installed the system, uploading of photograph of system, etc). Applicant also has to apply for net-metering. The net-metering application will forwarded to DISCOM and applicant has to follow instructions of DISCOM regarding payment of net-metering charges, signing of net-metering agreement, etc., as applicable.

Step-6: DISCOM officials will install the net-meter and inspect the system for fulfilment of minimum technical specifications and standards.

Step-7: Upon successful inspection and installation of net-meter, commissioning certificate would be generated online by DISCOM.

Step-8: Applicant has to submit bank details and upload copy of cancelled cheque. The fund handling agency will release the central Government subsidy directly into the bank account. The details of central Government subsidy available under simplified procedure may be checked on the National Portal.

Note: The applicant shall also check various informative material placed at Help Document section of the portal for better understanding of the procedure.

Ministry of New and Renewable Energy
Rooftop Solar Division

Central Financial Assistance (CFA)/ Central Government Subsidy for rooftop solar plant installed by a residential consumer under simplified procedure

Plant Capacity	Applicable Subsidy
Up to 3 kW	Rs. 14588/- per kW
Above 3 kW and up to 10 kW	Rs. 14588/- per kW for first 3 kW and thereafter Rs. 7294/- per kW
Above 10 kW	Rs. 94822/- fixed

Note: The CFA/subsidy will be available only for applications registered till 31.12.2022 in the National Portal and will be released after clearance by inspecting authority (DISCOM) on successful commissioning and installation of metering system as per specified procedure. The CFA/subsidy will not be applicable with retrospective effect.

Calculation of CFA/subsidy: The CFA/subsidy would be calculated on the basis of total solar module capacity/solar inverter capacity/capacity approved by DISCOM, whichever is lower.

Illustration for calculation of central Government subsidy

Rooftop Solar System Capacity **(lowest of total solar module capacity or solar inverter capacity/ capacity approved by DISCOM)**	**Applicable Subsidy**
2.5 kW	Rs. 14588/- X 2.5 = Rs. 36,470/-
3 kW	Rs. 14588/- X 3 = Rs. 43,764/-
4 kW	Rs. 14588/- X 3 + Rs. 7294/- X 1 = Rs. 51,058/-
6.5 kW	Rs. 14588/- X 3 + Rs. 7294/- X 3.5 = Rs. 69,293/-
10 kW	Rs. 94822/-
15 kW	Rs. 94822/-

Model Agreement

Between

Applicant and the registered/empanelled Vendor for installation of rooftop solar system in residential house of the Applicant under simplified procedure of Rooftop Solar Programme Ph-II

This agreement is executed on -------(Day)------(Month)-------(Year) for design, installation, commissioning and five years comprehensive maintenance of rooftop solar system to be installed under simplified procedure of Rooftop Solar Programme Ph-II.

Between

…….(Name of Applicant) having residential electricity connection with consumer number _____ from _____(DISCOM) at ……..(hereinafter referred as Applicant).

And

……..(Name of Vendor) is registered/ empanelled with the _____(hereinafter referred as DISCOM) and is having registered/functional office at …….(hereinafter referred as Vendor).

Both Applicant and the Vendor are jointly referred as Parties.

Whereas

- The Applicant intends to install rooftop solar system under simplified procedure of Rooftop Solar Programme Ph-II of the MNRE.
- The Vendor is registered/empanelled vendor with DISCOM for installation of rooftop solar under MNRE Schemes. The Vendor satisfies all the existing regulation pertaining to electrical safety and license in the respective state and it is not debarred or blacklisted from undertaking any such installations by any state/central Government agency.
- Both the parties are mutually agreed and understand their roles and responsibilities and have no liability to any other agency/firm/stakeholder especially to DISCOM and MNRE.

1. GENERAL TERMS:

1.1. The Applicant hereby represents and warrants that the Applicant has the sole legal capacity to enter into this Agreement and authorise the construction, installation and commissioning of the Rooftop Solar System ("**RTS System**") which is inclusive of Balance of System ("**BoS**") on the Applicant's premises ("**Applicant Site**"). The Vendor reserves its right to verify ownership of the Applicant Site and Applicant covenants to co-operate and provide all information and documentation required by the Vendor for the same.

1.2. Vendor may propose changes to the scope, nature and or schedule of the services being performed under this Agreement. All proposed changes must be mutually agreed between the Parties. If Parties fail to agree on the variation proposed, either Party may terminate this Agreement by serving notice as per Clause 13.

1.3. The Applicant understands and agrees that future changes in load, electricity usage patterns and/or electricity tariffs may affect the economics of the RTS System and these factors have not been and cannot be considered in any analysis or quotation provided by Vendor or its Authorized Persons (*defined below*).

2. RTS System

2.1. Total capacity of RTS System will be minimum _____kWp.

2.2. The Solar modules, inverters and BoS will confirm to minimum specifications and DCR requirement of MNRE.

2.3. Solar modules of _____make, _____model, _____Wp capacity each and _____% efficiency will be procured and installed by the Vendor

2.4. Solar inverter of _____make, _____model, _____kW rated output capacity will be procured and installed by the Vendor

2.5. Module mounting structure has to withstand minimum wind load pressure as specified by MNRE.

2.6. Other BoS installations shall be as per best industry practice with all safety and protection gears installed by the vendor.

3. PRICE AND PAYMENT TERMS

3.1. The cost of RTS System will be Rs. _____(to be decided mutually). The Applicant shall pay the total cost to the Vendor as under:

(i) XX% as an advance on confirmation of the order;

(ii) XX% against Proforma Invoice (PI) before dispatch of solar panels, inverters and other BoS items to be delivered;

(iii) XX% after installation and commissioning of the RTS System.

3.2. The order value and payment terms are fixed and will not be subject to any adjustment except as approved in writing by Vendor. The payment shall be made only through bankers' cheque / NEFT / RTGS / online payment portal as intimated by Vendor. No cash payments shall be accepted by Vendor or its Authorised Person.

4. REPRESENTATIONS MADE BY THE APPLICANT:

The Applicant acknowledges and agrees that:

4.1. any timeline or schedule shared by Vendor for the provision of services and delivery of the RTS System is only an estimate and Vendor will not be liable for any delay that is not attributable to Vendor;

4.2. all information disclosed by the Applicant to Vendor in connection with the supply of the RTS System (or any part thereof), services and generation estimation (including, without limitation, the load profile and power bill) are true and accurate, and acknowledges that Vendor has relied on the information produced by the Applicant to customise the RTS System layout and BoS design for the purposes of this Agreement;

4.3. all descriptive specifications, illustrations, drawings, data, dimensions, quotation, fact sheets, price lists and any advertising material circulated/published/provided by Vendor are approximate only;

4.4. any drawings, pre-feasibility report, specifications and plans composed by Vendor shall require the Applicant's approval within 5 (five) days of its receipt by electronic mail to Vendor and if the Applicant does not respond within this period, the drawings, specifications or plans shall be final and deemed to have been approved by the Applicant;

4.5. the Applicant shall not use the RTS System or any part thereof, other than in accordance with the product manufacturer's specifications, and covenants that any risk arising from misuse or/and misappropriate use shall be to the account of the Applicant alone.

4.6. The Applicant represents, warrants and covenants that:

(i) all electrical and plumbing infrastructure at the Applicant Site are in conformity with applicable laws;

(ii) the Applicant has the legal capacity to permit unfettered access to Vendor and its Authorized Persons for the purposes of execution and performance of this Agreement;

(iii) the Applicant has and will provide requisite power, water and other requisite resources and storage facilities for construction, installation, operation and maintenance of the RTS System;

(iv) the Applicant will provide support for site fabrication of structure, assembly and fitting of module mounting structure at Applicant Site;

(v) the Applicant will ensure that the Applicant Site is shadow free and free of all encumbrances during the lifetime of the RTS System;

(vi) Applicant should ensure that the Applicant regularly cleans and ensures accessibility and safety to the RTS System, as required by Vendor and dusting frequency in the premises.

(vii) Vendor is entitled to permit geo-tagging of the Applicant Site as a Vendor installation site;

(viii) Unless otherwise intimated by the Applicant in writing, Vendor is entitled to take photographs, videos and testimonials of the Applicant and the Applicant Site, and to create content which will become the property of Vendor and the same can be freely used by Vendor as part of its promotional and marketing activities across all platforms as it deems fit;

(ix) the Applicant validates the stability of the Applicant Site for the installation of the RTS System.

5. MAINTENANCE:

5.1. Vendor shall provide five-year free workmanship maintenance. Vendor shall visit the Applicant's premises at least once every quarter after commissioning of the RTS System for maintenance purposes.

5.2. During such maintenance visit, Vendor shall check all nuts and bolts, fuses, earth resistance and other consumables in respect of the RTS System to ensure that it is in good working condition.

5.3. Cleaning requirement/expectation from the Applicant side – Applicant responsibility, minimum expectation from Applicant that it will be cleaned regularly as per the dusting frequency.

6. ACCESS AND RIGHT OF ENTRY:

6.1. The Applicant hereby grants permission to Vendor and its authorized personnel, representatives, associates, officers, employees, financing agents, subcontractors ("**Authorized Persons**") to enter the Applicant Site for the purposes of:

(a) conducting feasibility study;
(b) storing the RTS System/any part thereof;
(c) installing the RTS System;
(d) inspecting the RTS System;
(e) conducting repairs and maintenance to the RTS System;
(f) removing the RTS System (or any part thereof), if necessary for any reason whatsoever;
(g) Such other matters as necessary to execute and perform its rights and obligations under this Agreement.

6.2. The Applicant shall ensure that third-party consents necessary for the Authorized Persons to access the Applicant Site are obtained prior to commencement of services under this Agreement.

7. WARRANTIES:

7.1. Product Warranty: The Applicant shall be entitled to manufacturers' warranty. Any warranty in relation to RTS System supplied to the Applicant by Vendor under this Agreement is limited to the warranty given by the manufacturer of the RTS System (or any part thereof) to Vendor.

7.2. Installation Warranty: Vendor warrants that all installations shall be free from workmanship defects or BOS defects for a period of five years from the date of installation of the RTS System. The warranty is limited to Vendor rectifying the workmanship or BOS defects at Vendor's expense in respect of those defects reported by the Applicant, in writing. The Applicant is obliged and liable to report such defects within 15 (fifteen) days of occurrence of such defect.

7.3. Subject to manufacturer warranty, Vendor warrants that the solar modules supplied herein shall have tolerance within a five percentage range (+/-5%). The peak-power point voltage and the peak-power point current of any supplied solar module and/or any module string (series connected modules) shall not vary by more than 5% (five percent) from the respective arithmetic means for all modules and/or for all module strings, as the case may be, provided

the RTS System is properly maintained and the Applicant Site is free from shadow at the time of operation of the RTS System.

7.4. Exceptions for warranty:

(a) Any attempt by any person other than Vendor or its Authorised Persons to adjust, modify, repair or provide maintenance to the RTS System, shall disentitle the Applicant of the warranty provided by Vendor hereunder.

(b) Vendor shall not be liable for any degeneration or damage to the RTS System due to any action or inaction on the part of the Applicant.

(c) Vendor shall not be bound or liable to remedy any damage, fault, failure or malfunction of the RTS System owing to external causes, including but not limited to accidents, misuse, neglect, if usage and/or storage and/or installation are non-confirming to product instructions, modifications by the Applicant leading to shading or accessibility issues, failure to perform required maintenance, normal wear and tear, Force Majeure Event, or negligence or default attributable to the Applicant.

(d) Vendor shall not be liable to repair or remedy any accessories or parts added to the RTS System that were not originally sourced by Vendor to the Applicant.

8. PERFORMANCE GUARANTEE

8.1. Vendor guarantees minimum system performance ratio of 75% as per performance ratio test carried out in adherence to IEC 61724 or equivalent BIS for a period of five years.

9. INSURANCE:

9.1. Vendor may, at its sole discretion, obtain insurance covering risks of loss/damage to the RTS System (any part thereof) during transit from Vendor's warehouse until delivery to the Applicant Site and until installation and commissioning.

9.2. Thereafter, all risk shall pass on to the Applicant and the Applicant may accordingly procure relevant insurances.

10. CANCELLATION:

10.1. The Applicant may cancel the order placed on Vendor within 7 (seven) days from the date of remittance of advance money or the date of order acceptance, whichever is earlier ("**Order Confirmation**") by serving notice as per Clause 13.

10.2. If the Applicant cancels the order after the expiry of 7 (seven) days from the date of Order Form, the Applicant shall be liable to pay Vendor, a cancellation fee of XX% of the total order value *plus* costs and expenses incurred by Vendor, including, costs for labour, design, return of products, administrative costs, subvention costs.

10.3. Notwithstanding the aforesaid, the Applicant shall not be entitled to cancel the Order Form after Vendor has dispatched the RTS System (or any part thereof, including BOS) to the Applicant Site. If Applicant chooses to terminate the Order Form after dispatch, the entire amount paid by the Applicant till date, shall be forfeited by Vendor.

11. LIMITATION OF LIABILITY AND INDEMNITY:

11.1. To the extent that terms implied by law apply to the RTS System and the services rendered under this Agreement, Vendor's liability for any breach of those terms is limited to:

(a) repairing or replacing the RTS System/any part thereof, as applicable; or

(b) Refund of the moneys paid by the Applicant to Vendor, if Vendor cannot fulfil the order.

12. SUSPENSION AND TERMINATION:

12.1. If the Applicant fails to pay any sum due under this Agreement on the due date, Vendor may, in addition to its other rights under this Agreement, suspend its obligations under this Agreement until all outstanding amounts (including interest due) are paid.

13. NOTICES: Any notice or other communication under this Agreement to Vendor and or to the Applicant, shall be in writing, in English language and shall be delivered or sent: (a) by electronic mail and/or (b) by hand delivery or registered post/courier, at the registered address of Applicant/Vendor.

14. FORCE MAJEURE EVENT:

14.1. Neither Party shall be in default due to any delay or failure to perform its/his/her/their obligations under this Agreement which arises from or is a consequence of occurrence of an event which is beyond the reasonable control of such Party, and which makes performance of its/his/her/their obligations under this Agreement impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, but is not limited to, war, riot, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, pandemic, epidemic, embargo, strikes, lockouts, labour difficulties, other industrial action, acts of government, unavailability of equipment from vendor, changes requested by the Applicant ("**Force Majeure Event**").

15. GOVERNING LAW AND DISPUTE RESOLUTION:

15.1. The interpretation and enforcement of this Agreement shall be governed by the laws of India

15.2. In the event of any dispute, controversy or difference between the Parties arising out of, or relating to this Agreement ("**Dispute**"), both Parties shall make an effort to resolve the Dispute in good faith, failing which, any Party to the Dispute shall be entitled to refer the Dispute to arbitration to resolve the Dispute in the manner set out in this Clause. The rights and obligations of the Parties under this Agreement shall remain in full force and effect pending the award in such arbitration proceeding.

15.3. The arbitration proceeding shall be governed by the provisions of the Arbitration and Conciliation Act, 1996 and shall be settled by a sole arbitrator mutually appointed by the Parties.

(Applicant) (Vendor)

Witness
1.

2.

TECHNICAL SPECIFICATIONS FOR ROOFTOP SOLAR PLANTS INSTALLED UNDER SIMPLIFIED PROCEDURE

The projects under simplified procedure shall be commissioned as per the technical specifications given below. The vendor will be solely responsible for any shortcomings or negligence/malpractice and will lead may lead to blacklisting of the firm/vendor from participation in any programme of the Ministry. Domestic Modules are to be used failing which it will be assumed that system is not matching the requirement of the scheme and appropriate action would be taken against the vendor.

1. DEFINITION

A Roof Top Solar (RTS) Photo Voltaic (PV) system shall consist of following equipment/components:

1. Solar Photo Voltaic (SPV) modules consisting of required number of Crystalline PV modules
2. Inverter/PCU
3. Module Mounting structures
4. Energy Meter
5. Array Junction Boxes
6. DC Distribution Box
7. AC Distribution Box
8. Protections – Earthing, Lightning, Surge
9. Cables
10. Drawing & Manuals
11. Miscellaneous

1. Solar PV modules

1.1. The PV modules and Solar Cell used should be made in India.

1.2. The PV modules used must qualify to the latest edition of IEC standards or equivalent BIS standards, i.e. IEC 61215/IS14286, IEC 61853-Part I/IS 16170-Part I, IEC 61730 Part-1 & Part 2 and IEC 62804 (PID). For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC 61701/IS 61701.

1.3. The rated power of solar PV module shall have maximum tolerance up to +3%.

1.4. The peak-power point current of any supplied module string (series connected modules) shall not vary by +1% from the respective arithmetic means for all modules and/or for all module strings (connected to the same MPPT), as the case may be.

1.5. The peak-power point voltage of any supplied module string (series connected modules) shall not vary by + 2% from the respective arithmetic means for all modules and/or for all module strings (connected to the same MPPT), as the case may be.

1.6. The temperature co-efficient power of the PV module shall be equal to or better than -0.45%/°C.

1.7. Solar PV modules of minimum capacity 250 Wp to be used.

1.8. The PV Module efficiency should be minimum 16%.

1.9. Solar PV modules of minimum fill factor 75%, to be used.

1.10. All electrical parameters at STC shall have to be provided

1.11. The PV modules shall be equipped with IP 65 or better protection level junction box with required numbers of bypass diodes of appropriate rating and appropriately sized output power cable of symmetric length with MC4 or equivalent solar connectors. The IP level for protection may be chosen based on following conditions:

i. An IP 65 rated enclosure is suitable for most outdoor enclosures that won't encounter extreme weather such as flooding.

ii. An IP 67 rated enclosure is suitable at locations which may encounter temporary submersion at depths of up to one meter.

iii. An IP 68 enclosure is recommended if there may exist situations of submergence for extended periods of time and at substantial depths.

1.12. All PV modules should carry a performance warranty of >90% during the first 10 years, and >80% during the next 15 years. Further, module shall have performance warranty of >97% during the first year of installation—degradation of the module below 1 % per annum.

1.13. The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a period not less than five (05) years from the date of commissioning:

1.14. Defects and/or failures due to manufacturing.

1.15. Defects and/or failures due to quality of materials.

1.16. Nonconformity to specifications due to faulty manufacturing and/or inspection processes. If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the Owners sole option.

1.17. PV modules must be tested and approved by one of the NABL accredited and BIS approved test centres.

1.18. Modules deployed must use a RF identification tag laminated inside the glass. The following information must be mentioned in the RFID used on each module:

i. Name of the manufacturer of the PV module

ii. Name of the manufacturer of Solar Cells.

iii. Month & year of the manufacture (separate for solar cells and modules)

iv. Country of origin (separately for solar cells and module)

v. I-V curve for the module Wattage, Im, Vm and FF for the module

vi. Unique Serial No and Model No of the module

vii. Date and year of obtaining IEC PV module qualification certificate.

viii. Name of the test lab issuing IEC certificate.

ix. Other relevant information on traceability of solar cells and module as per ISO 9001 and ISO 14001.
x. Nominal wattage +3%.
xi. Brand Name, if applicable.

1.19. Other details as per IS/IEC 61730-1 clause 11 should be provided at appropriate place. In addition to the above, the following information should also be provided:
i. The actual Power Output Pmax shall be mentioned on the label pasted on the back side of PV Module.
ii. The Maximum system voltage for which the module is suitable to be provided on the back sheet of the module.
iii. Polarity of terminals or leads (colour coding is permissible) on junction Box housing near cable entry or cable and connector.

1.20. Unique Serial No, Model No, Name of Manufacturer, Manufacturing year, Make in India logo and module wattage details should be displayed inside the laminated glass.

2. Inverter/PCU

2.1. Inverters/PCU should comply with applicable IEC/equivalent BIS standard for efficiency measurements and environmental tests as per standard codes IEC 61683/IS 61683, IS 16221 (Part 2), IS 16169 and IEC 60068-2(1,2,14,30) /Equivalent BIS Std.
2.2. Maximum Power Point Tracker (MPPT) shall be integrated in the inverter/PCU to maximize energy drawn from the array. Charge controller (if any) / MPPT units environmental testing should qualify IEC 60068-2(1, 2, 14, 30)/Equivalent BIS standard. The junction boxes/enclosures should be IP 65 or better (for outdoor)/ IP 54or better (indoor) and as per IEC 529 Specifications.
2.3. All inverters/PCUs shall be IEC 61000 compliant for electromagnetic compatibility, harmonics, Surge, etc.
2.4. The PCU/ inverter shall have overloading capacity of minimum 10%.
2.5. Typical technical features of the inverter shall be as follows-
i. Switching devices: IGBT/MOSFET
ii. Control: Microprocessor/DSP
iii. Nominal AC output voltage and frequency: as per CEA/State regulations
iv. Output frequency: 50 Hz
v. Grid Frequency Synchronization range: as per CEA/State Regulations
vi. Ambient temperature considered: -20°C to 60°C
vii. Humidity: 95 % Non-condensing
viii. Protection of Enclosure: IP-54 (Minimum) for indoor and IP-65(Minimum) for outdoor.
ix. Grid Frequency Tolerance range: as per CEA/State regulations
x. Grid Voltage tolerance: as per CEA/State Regulations

xi. No-load losses: Less than 1% of rated power
xii. Inverter efficiency (Min.): >93% (In case of 10 kW or above with in-built galvanic isolation) >97% (In case of 10 kW or above without inbuilt galvanic isolation)
xiii. Inverter efficiency (minimum): > 90% (In case of less than 10 kW)
xiv. THD: < 3%
xv. PF: > 0.9 (lag or lead)
xvi. Should not inject DC power more than 0.5% of full rated output at the interconnection point and comply to IEEE 519.

2.6. The output power factor of inverter should be suitable for all voltage ranges or sink of reactive power, inverter should have internal protection arrangement against any sustain fault in feeder line and against the lightning on feeder.

2.7. All the Inverters should contain the following clear and indelible Marking Label & Warning Label as per IS16221 Part II, clause 5. The equipment shall, as a minimum, be permanently marked with:
i. The name or trademark of the manufacturer or supplier;
ii. A model number, name or other means to identify the equipment,
iii. A serial number, code or other marking allowing identification of manufacturing location and the manufacturing batch or date within a twelve-month time period.
iv. Input voltage, type of voltage (a.c. or d.c.), frequency, and maximum continuous current for each input.
v. Output voltage, type of voltage (a.c. or d.c.), frequency, maximum continuous current, and for a.c. outputs, either the power or power factor for each output.
vi. The Ingress Protection (IP) rating

2.8. Marking shall be located adjacent to each fuse or fuse holder, or on the fuse holder, or in another location provided that it is obvious to which fuse the marking applies, giving the fuse current rating and voltage rating for fuses that may be changed at the installed site.

2.9. In case the consumer is having a *3-ϕ* connection, *1-ϕ*/*3-ϕ* inverter shall be provided by the vendor as per the consumer's requirement and regulations of the State.

2.10. Inverter/PCU shall be capable of complete automatic operation including wake-up, synchronization & shutdown.

2.11. For CFA calculation, minimum of following two shall be considered:
i. Solar PV array capacity in KWp
ii. Inverter Capacity in KW

2.12. Integration of PV Power with Grid & Grid Islanding:
i. The output power from SPV would be fed to the inverters/PCU which converts DC produced by SPV array to AC and feeds it into the main electricity grid after synchronization.
ii. In the event of a power failure on the electric grid, it is required that any independent power-producing inverters attached to the grid turn off in a short

period of time. This prevents the DC-to-AC inverters from continuing to feed power into small sections of the grid, known as “islands.” Powered islands present a risk to workers who may expect the area to be unpowered, and they may also damage grid-tied equipment. The Rooftop PV system shall be equipped with islanding protection. In addition to disconnection from the grid (due to islanding protection) disconnection due to under and over voltage conditions shall also be provided, if not available in inverter.

iii. MCB/MCCB or a manual isolation switch, besides automatic disconnection to grid, would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance. This switch shall be locked by the utility personnel.

3. Module Mounting Structure (MMS):

3.1. Supply, installation, erection and acceptance of module mounting structure (MMS) with all necessary accessories, auxiliaries and spare part shall be in the scope of the work.

3.2. Module mounting structures can be made from three types of materials. They are Hot Dip Galvanized Iron, Aluminium and Hot Dip Galvanized Mild Steel (MS). However, MS will be preferred for raised structure.

3.3. MMS Steel shall be as per latest IS 2062:2011 and galvanization of the mounting structure shall be in compliance of latest IS 4759. MMS Aluminium shall be as per AA6063 T6. For Aluminium structures, necessary protection towards rusting need to be provided either by coating or anodization.

3.4. All bolts, nuts, fasteners shall be of stainless steel of grade SS 304 or hot dip galvanized, panel mounting clamps shall be of aluminium and must sustain the adverse climatic conditions. Structural material shall be corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts.

3.5. The module mounting structures should have angle of inclination as per the site conditions to take maximum insolation and complete shadow-free operation during generation hours. However, to accommodate more capacity the angle of inclination may be reduced until the plant meets the specified performance ratio requirements.

3.6. The Mounting structure shall be so designed to withstand the speed for the wind zone of the location where a PV system is proposed to be installed. The PV array structure design shall be appropriate with a factor of safety of minimum 1.5.

3.7. The upper edge of the module must be covered with wind shield so as to avoid build air ingress below the module. Slight clearance must be provided on both edges (upper & lower) to allow air for cooling.

3.8. Suitable fastening arrangement such as grouting and calming should be provided to secure the installation against the specific wind speed. The Empanelled Agency shall be fully responsible for any damages to SPV System caused due to high wind velocity within guarantee period as per technical specification.

3.9. The structures shall be designed to allow easy replacement, repairing and cleaning of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels. Necessary testing provision for MMS to be made available at site.

3.10. Adequate spacing shall be provided between two panel frames and rows of panels to facilitate personnel protection, ease of installation, replacement, cleaning of panels and electrical maintenance.

3.11. The structure shall be designed to withstand operating environmental conditions for a period of minimum 25 years.

3.12. The Rooftop Structures maybe classified in three broad categories as follows (drawings at **Annexure-X**):

i. Ballast structure

a. The mounting structure must be Non-invasive ballast type and any sort of penetration of roof to be avoided.
b. The minimum clearance of the structure from the roof level should be in between 70-150 mm to allow ventilation for cooling, also ease of cleaning and maintenance of panels as well as cleaning of terrace.
c. The structures should be suitably loaded with reinforced concrete blocks of appropriate weight made out of M25 concrete mixture.

ii. Tin shed

a. The structure design should be as per the slope of the tin shed.
b. The inclination angle of structure can be done in two ways-
   b.1. Parallel to the tin shed (flat keeping zero-degree tiling angle), if the slope of shed in Proper south direction
   b.2. With same tilt angle based on the slope of tin shed to get the maximum output.
c. The minimum clearance of the lowest point from the tin shade should be more then 100mm.
d. The base of structure should be connected on the Purlin of tin shed with the proper riveting.
e. All structure member should be of minimum 2 mm thickness.

iii. RCC Elevated structure: It can be divided into further three categories:

A. Minimum Ground clearance (300MM – 1000 MM)

a. The structure shall be designed to allow easy replacement of any module and shall be in line with site requirement. The gap between module should be minimum 30MM.
b. Base Plate – Base plate thickness of the Structure should be 5MM for this segment.
c. Column – Structure Column should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.

d. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 70MM in Web side (y-axis) and 40MM in flange side (x-axis).
e. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 60MM in Web side and 40MM in flange side in Lip section.
f. Front/back bracing – The section for bracing part should be minimum 2MM thickness.
g. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.
h. For single portrait structure the minimum ground clearance should be 500MM.

B. Medium Ground clearance (1000MM – 2000 MM) (for reference only)

a. Base Plate – Base plate thickness of the Structure should be Minimum 6MM for this segment.
b. Column – Structure Column should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 80MM in Web side and 50MM in flange side in Lip section.
c. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
d. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
e. Front/back bracing – The section for bracing part should be minimum 2MM thickness.
f. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.

C. Maximum Ground clearance (2000MM – 3000 MM) (for reference only)

a. Base Plate – Base plate thickness of the Structure should be minimum 8 MM for this segment.
b. Column – Structure Column thickness should be minimum 2.6MM in square hollow section (minimum 50x50) or rectangular hollow section (minimum 60x40) or 3MM in C-Channel section.

c. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in Channel section. The minimum section should be 80MM in Web side and 50MM in flange side in Lip section.
d. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 80MM in Web side and 50MM in flange side in Lip section.
e. Front/back bracing – The section for bracing part should be minimum 3MM thickness.
f. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.

D. Super elevated structure (More than 3000 MM) (for reference only)

D.1. Base structure

a. Base Plate – Base plate thickness of the Structure should be 10MM for this segment.
b. Column – Structure Column minimum thickness should be minimum 2.9MM in square hollow section (minimum 60x60) or rectangular hollow section (minimum 80x40).
c. Rafter - Structure Rafter minimum thickness should be minimum 2.9MM in square hollow section (minimum 60x60) or rectangular hollow section (minimum 80x40).
d. Cross bracing – Bracing for the connection of rafter and column should be of minimum thickness of 4mm L-angle with the help of minimum bolt diameter of 10mm.

D.2. Upper structure of super elevated structure –

a. Base Plate – Base plate thickness of the Structure should be minimum 5MM for this segment.
b. Column – Structure Column should be minimum 2MM in Lip section / 3MM in Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
c. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
d. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 60MM in Web side and 40MM in flange side in Lip section.
e. Front/back bracing – The section for bracing part should be minimum 2MM thickness.
f. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and

purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.

D.3. If distance between two legs in X-Direction is more than 3M than sag angle/Bar should be provide for purlin to avoid deflection failure. The sag angle should be minimum 2MM thick, and bar should be minimum 12Dia.

D.4. Degree - The Module alignment and tilt angle shell be calculated to provide the maximum annual energy output. This shall be decided on the location of array installation.

D.5. Foundation – Foundation should be as per the roof condition; two types of the foundation can be done- either penetrating the roof or without penetrating the roof.

a. If penetration on the roof is allowed (based on the client requirement) then minimum 12MM diameter anchor fasteners with minimum length 100MM can be used with proper chipping. The minimum RCC size should be 400x400x300 cubic mm. Material grade of foundation should be minimum M20.
b. If penetration on roof is not allowed, then foundation can be done with the help of 'J Bolt' (refer IS 5624 for foundation hardware). Proper Neto bond solution should be used to adhere the Foundation block with the RCC roof. Foundation J - bolt length should be minimum 12MM diameter and length should be minimum 300MM.

3.13. Material standards:

i. Design of foundation for mounting the structure should be as per defined standards which clearly states the Load Bearing Capacity & other relevant parameters for foundation design (As per IS 6403 / 456 / 4091 / 875).
ii. Grade of raw material to be used for mounting the structures so that it complies the defined wind loading conditions (As per IS 875 - III) should be referred as follows (IS 2062 – for angles and channels, IS 1079 – for sheet, IS 1161 & 1239 for round pipes, IS 4923 for rectangular and square hollow section)
iii. Test reports for the raw material should be as per IS 1852 / 808 / 2062 / 1079 / 811.
iv. In process inspection report as per approved drawing & tolerance should be as per IS 7215.
v. For ascertaining proper welding of structure part following should be referred:
   a. D.P. Test (Pin Hole / Crack) (IS 822)
   b. Weld wire grade should be of grade (ER 70 S - 6)

vi. For ascertaining hot dip galvanizing of fabricated structure following should be referred: -
   a. Min coating required should be as per IS 4759 & EN 1461.
   b. Testing of galvanized material
      - Pierce Test (IS 2633)
      - Mass of Zinc (IS 6745)
      - Adhesion Test (IS 2629)
      - CuSO4 Test (IS 2633)
      - Superior High-Grade Zinc Ingot should be of 99.999% purity (IS 209) (Preferably Hindustan Zinc Limited or Equivalent).

vii. Foundation Hardware – If using foundation bolt in foundation then it should be as per IS 5624.

4. Metering

4.1. A Roof Top Solar (RTS) Photo Voltaic (PV) system shall consist of following energy meters:
   i. Net meter: To record import and export units
   ii. Generation meter: To keep record for total generation of the plant.

4.2. The installation of meters including CTs & PTs, wherever applicable, shall be carried out by the respective DisComs as per the terms, conditions and procedures laid down by the concerned SERCs/DISCOMs.

5. Array Junction Boxes:

4.1 The junction boxes are to be provided in the PV array for termination of connecting cables. The Junction Boxes (JBs) shall be made of GRP/FRP/Powder Coated aluminum /cast aluminum alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JBs shall be such that input & output termination can be made through suitable cable glands. Suitable markings shall be provided on the bus-bars for easy identification and cable ferrules will be fitted at the cable termination points for identification.

4.2 Copper bus bars/terminal blocks housed in the junction box with suitable termination threads Conforming to IP 65 or better standard and IEC 62208 Hinged door with EPDM rubber gasket to prevent water entry, Single /double compression cable glands should be provided.

4.3 Polyamide glands and MC4 Connectors may also be provided. The rating of the junction box shall be suitable with adequate safety factor to interconnect the Solar PV array.

4.4 Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification.

4.5 Junction boxes shall be mounted on the MMS such that they are easily accessible and are protected from direct sunlight and harsh weather.

5 DC Distribution Box (DCDB):

5.1 May not be required for small plants, if suitable arrangement is available in the inverter.

5.2 DC Distribution Box are to be provided to receive the DC output from the PV array field.

5.3 DCDBs shall be dust & vermin proof conform having IP 65 or better protection, as per site conditions.

5.4 The bus bars are made of EC grade copper of required size. Suitable capacity MCBs/MCCB shall be provided for controlling the DC power output to the inverter along with necessary surge arrestors. MCB shall be used for currents up to 63 Amperes, and MCCB shall be used for currents greater than 63 Amperes.

6 AC Distribution Box (ACDB):

6.1 AC Distribution Panel Board (DPB) shall control the AC power from inverter, and should have necessary surge arrestors, if required. There is interconnection from ACDB to mains at LT Bus bar while in grid tied mode.

6.2 All switches and the circuit breakers, connectors should conform to IEC 60947:2019, part I, II and III/ IS 60947 part I, II and III.

6.3 The isolators, cabling work should be undertaken as part of the project.

6.4 All the Panel's shall be metal clad, totally enclosed, rigid, floor mounted, air -insulated, cubical type suitable for operation on *1-ϕ*/*3-ϕ*, 415 or 230 volts, 50 Hz (or voltage levels as per CEA/State regulations).

6.5 The panels shall be designed for minimum expected ambient temperature of 45 degree Celsius, 80 percent humidity and dusty weather.

6.6 All indoor panels will have protection of IP 54 or better, as per site conditions. All outdoor panels will have protection of IP 65 or better, as per site conditions.

6.7 Should conform to Indian Electricity Act and CEA safety regulations (till last amendment).

6.8 All the 415 or 230 volts (or voltage levels as per CEA/State regulations) AC devices / equipment like bus support insulators, circuit breakers, SPDs, Voltage Transformers (VTs) etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions.

i. Variation in supply voltage: as per CEA/State regulations
ii. Variation in supply frequency: as per CEA/State regulations

6.9 The inverter output shall have the necessary rated AC surge arrestors, if required and MCB/ MCCB. RCCB shall be used for successful operation of the PV system, if inverter does not have required earth fault/residual current protection.

7 Protections

The system should be provided with all necessary protections like earthing, Lightning, and Surge Protection, as described below:

7.1 **Earthing Protection**

i. The earthing shall be done in accordance with latest Standards.
ii. Each array structure of the PV yard, Low Tension (LT) power system, earthing grid for switchyard, all electrical equipment, inverter, all junction boxes, etc. shall be grounded properly as per IS 3043-2018.
iii. All metal casing/ shielding of the plant shall be thoroughly grounded in accordance with CEA Safety Regulation 2010. In addition, the lightning arrester/masts should also be earthed inside the array field.
iv. Earth resistance should be as low as possible and shall never be higher than 5 ohms.
v. For 10 KW and above systems, separate three earth pits shall be provided for individual three earthing viz.: DC side earthing, AC side earthing and lightning arrestor earthing.

7.2 **Lightning Protection**

i. The SPV power plants shall be provided with lightning & over voltage protection, if required. The main aim in this protection shall be to reduce the overvoltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc. Lightning arrestor shall not be installed on the mounting structure.
ii. The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors (LAs). Lightning protection should be provided as per NFC17-102:2011/IEC 62305 standard.
iii. The protection against induced high-voltages shall be provided by the use of Metal Oxide Varistors (MOVs)/Franklin Rod type LA/Early streamer type LA.
iv. The current carrying cable from lightning arrestor to the earth pit should have sufficient current carrying capacity according to IEC 62305. According to standard, the minimum requirement for a lightning protection system designed for class of LPS III is a 6 mm^2 copper/ 16 mm^2 aluminum or GI strip bearing size 25*3 mm thick). Separate pipe for running earth wires of Lightning Arrestor shall be used.

7.3 **Surge Protection**

i. Internal surge protection, wherever required, shall be provided.
ii. It will consist of three SPD type-II/MOV type surge arrestors connected from +ve and –ve terminals to earth.

8 CABLES

8.1 All cables should conform to latest edition of IEC/equivalent BIS Standards alongwith IEC 60227/IS 694, IEC 60502/IS 1554 standards.

8.2 Cables should be flexible and should have good resistance to heat, cold, water, oil, abrasion etc.

8.3 Armored cable should be used and overall PVC type 'A' pressure extruded insulation or XLPE insulation should be there for UV protection.

8.4 Cables should have Multi Strand, annealed high conductivity copper conductor on DC side and copper/FRLS type Aluminum conductor on AC side. For DC cabling, multi-core cables shall not be used.

8.5 Cables should have operating temperature range of -10°C to +80°C and voltage rating of 660/1000 V.

8.6 Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop less than 2% (DC Cable losses).

8.7 The size of each type of AC cable selected shall be based on minimum voltage drop. However; the maximum drop shall be limited to 2%.

8.8 The electric cables for DC systems for rated voltage of 1500 V shall conform to BIS 17293:2020.

8.9 All cable/wires are to be routed in a RPVC pipe/ GI cable tray and suitably tagged and marked with proper manner by good quality ferule or by other means so that the cable is easily identified.

8.10 All cable trays including covers to be provided.

8.11 Thermo-plastic clamps to be used to clamp the cables and conduits, at intervals not exceeding 50 cm.

8.12 Size of neutral wire shall be equal to the size of phase wires, in a three phase system.

8.13 The Cable should be so selected that it should be compatible up to the life of the solar PV panels i.e. 25 years.

9 DRAWINGS & MANUALS:

9.1 Operation & Maintenance manual/user manual, Engineering and Electrical Drawings shall be supplied along with the power plant.

9.2 The manual shall include complete system details such as array lay out, schematic of the system, inverter details, working principle etc.

9.3 The Manual should also include all the Dos & Don'ts of Power Plant along with Graphical Representation with indication of proper methodology for cleaning, Operation and Maintenance etc.

9.4 Step by step maintenance and troubleshooting procedures shall also be given in the manuals.

9.5 Vendors should also educate the consumers during their AMC period.

10 Miscellaneous:

10.1 Connectivity: The maximum capacity for interconnection with the grid at a specific voltage level shall be as specified in the SERC regulation for Grid connectivity and norms of DISCOM and amended from time to time.

10.2 Safety measures: Electrical safety of the installation(s) including connectivity with the grid must be taken into account and all the safety rules & regulations applicable as per Electricity Act, 2003 and CEA Safety Regulation 2010 etc. must be followed.

10.3 Shadow analysis: The shadow analysis report with the instrument such as Solar Pathfinder or professional shadow analysis software of each site should be provided and the consumer should be educated to install the system only in shadow free space. Lower performance of the system due to shadow effect shall be liable for penalty for lower performance.

Quality Certification, Standards and Testing for Grid-Connected Rooftop Solar PV Systems/Power Plants

Solar PV Modules/Panels

IEC 61215 and IS 14286	Design Qualification and Type Approval for Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
IEC 61701:2011	Salt Mist Corrosion Testing of Photovoltaic (PV) Modules
IEC 61853- 1:2011 / IS 16170-1:2014	Photovoltaic (PV) module performance testing and energy rating –:Irradiance and temperature performance measurements, and power Rating.
IEC 62716	Photovoltaic (PV) Modules – Ammonia (NH3) Corrosion Testing (as per the site condition like dairies, toilets etc)
IEC 61730-1,2	Photovoltaic (PV) Module Safety Qualification – Part 1: Requirementsfor Construction, Part 2: Requirements for Testing
IEC 62804	Photovoltaic (PV) modules – Test method for detection of potential-induced degradation. IEC 62804-1: Part 1: Crystalline Silicon
Solar PV Inverters	
IEC 62109 or IS : 16221	Safety of power converters for use in photovoltaic power systems – Part 1: General requirements, and Safety of power converters for usein photovoltaic power systems Part 2: Particular requirements for inverters. Safety compliance (Protection degree IP 65 or better for outdoor mounting, IP 54 or better for indoor mounting)
IS/IEC 61683 latest (as applicable)	Photovoltaic Systems – Power conditioners: Procedure for MeasuringEfficiency (10%, 25%, 50%, 75% & 90-100% Loading Conditions)
IEC 60068-2 /IEC 62093 (as applicable)	Environmental Testing of PV System – Power Conditioners and Inverters
IEC 62116:2014/ IS16169	Utility-interconnected photovoltaic inverters - Test procedure of islanding prevention measures
Fuses	
IS/IEC 60947 (Part 1, 2 & 3), EN 50521	General safety requirements for connectors, switches, circuit breakers (AC/DC): 1)Low-voltage Switchgear and Control-gear, Part 1: General rules 2)Low-Voltage Switchgear and Control-gear, Part 2: Circuit Breakers 3)Low-voltage switchgear and Control-gear, Part 3: Switches, disconnectors switch-disconnectors and fuse-combination units 4) EN 50521: Connectors for photovoltaic system-Safety requirementsand tests
IEC 60269-6:2010	Low-voltage fuses - Part 6: Supplementary requirements for fuse-linksfor the protection of solar photovoltaic energy systems
Solar PV Roof Mounting Structure	

IS 2062/IS 4759/AA6063 T6	Material for the structure mounting
Surge Arrestors	
BFC 17-102:2011/ NFC 102:2011/ IEC 62305	Lightening Protection Standard
IEC 60364-5-53/ IS 15086-5 (SPD) IEC 61643- 11:2011	Electrical installations of buildings - Part 5-53: Selection and erectionof electrical equipment - Isolation, switching and control Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods
Cables	
IEC 60227/IS 694, IEC 60502/IS 1554 (Part 1& 2)/ IEC69947 (as applicable)	General test and measuring method for PVC (Polyvinyl chloride) insulated cables (for working voltages up to and including 1100 V, andUV resistant for outdoor installation)
BS EN 50618	Electric cables for photovoltaic systems (BT(DE/NOT)258), mainly for DC Cables
Earthing /Lightning	
IEC 62561/IEC 60634 Series (Chemical earthing) (as applicable)	IEC 62561-1: Lightning protection system components (LPSC) - Part:Requirements for connection components IEC 62561-2: Lightning protection system components (LPSC) – Part 2:Requirements for conductors and earth electrodes IEC 62561-7: Lightning protection system components (LPSC) - Part 7:Requirements for earthing enhancing compounds
Junction Boxes	
IEC 60529	Junction boxes and solar panel terminal boxes shall be of the thermo-plastic type with IP 65 or better protection for outdoor use, and IP 54 or better protection for indoor use

Quality Certification, Standards and Testing for Grid-connected Rooftop Solar PV Systems/Power Plants

Quality certification and standards for grid-connected rooftop solar PV systems are essential for the successful mass-scale implementation of this technology. It is also imperative to put in place an efficient and rigorous monitoring mechanism, adherence to these standards. The vendor will be solely responsible for compliance of all quality certifications in rooftop solar installations under simplified procedure. All components of grid-connected rooftop solar PV system/ plant must conform to the relevant standards and certifications given below:

Solar PV Modules/Panels	
IEC 61215/ IS 14286	Design Qualification and Type Approval for Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
IEC 61701	Salt Mist Corrosion Testing of Photovoltaic (PV) Modules
IEC 61853- Part 1/ IS 16170: Part 1	Photovoltaic (PV) module performance testing and energy rating: Irradiance and temperature performance measurements, and power rating
IEC 62716	Photovoltaic (PV) Modules – Ammonia (NH3) Corrosion Testing (As per the site condition like dairies, toilets)
IEC 61730-1,2	Photovoltaic (PV) Module Safety Qualification – Part 1: Requirements for Construction, Part 2: Requirements for Testing
IEC 62804	Photovoltaic (PV) modules - Test methods for the detection of potential-induced degradation. IEC TS 62804-1: Part 1: Crystalline silicon (mandatory for applications where the system voltage is > 600 VDC and advisory for installations where the system voltage is < 600 VDC)
IEC 62759-1	Photovoltaic (PV) modules – Transportation testing, Part 1: Transportation and shipping of module package units
Solar PV Inverters	
IEC 62109-1, IEC 62109-2	Safety of power converters for use in photovoltaic power systems – Part 1: General requirements, and Safety of power converters for use in photovoltaic power systems Part 2: Particular requirements for inverters. Safety compliance (Protection degree IP 65 for outdoor mounting, IP 54 for indoor mounting)
IEC/IS 61683 (as applicable)	Photovoltaic Systems – Power conditioners: Procedure for Measuring Efficiency (10%, 25%, 50%, 75% & 90-100% Loading Conditions)

BS EN 50530 (as applicable)	Overall efficiency of grid-connected photovoltaic inverters: This European Standard provides a procedure for the measurement of the accuracy of the maximum power point tracking (MPPT) of inverters, which are used in grid- connected photovoltaic systems. In that case the inverter energizes a low voltage grid of stable AC voltage and constant frequency. Both the static and dynamic MPPT efficiency is considered.
IEC 62116/ UL 1741/ IEEE 1547 (as applicable)	Utility-interconnected Photovoltaic Inverters - Test Procedure of Islanding Prevention Measures
IEC 60255-27	Measuring relays and protection equipment – Part 27: Product safety requirements
IEC 60068-2 (1, 2, 14 & 30)	Environmental Testing of PV System – Power Conditioners and Inverters a) IEC 60068-2-1: Environmental testing - Part 2-1: Tests - Test A: Cold b) IEC 60068-2-2: Environmental testing - Part 2-2: Tests - Test B: Dry heat c) IEC 60068-2-14: Environmental testing - Part 2-14: Tests - Test N: Change of temperature e) IEC 60068-2-30: Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)
IEC 61000 – 2,3,5 (as applicable)	Electromagnetic Interference (EMI) and Electromagnetic Compatibility (EMC) testing of PV Inverters
Fuse	
IS/IEC 60947 (Part 1, 2 & 3), EN 50521	General safety requirements for connectors, switches, circuit breakers (AC/DC): a) Low-voltage Switchgear and Control-gear, Part 1: General rules b) Low-Voltage Switchgear and Control-gear, Part 2: Circuit Breakers c) Low-voltage switchgear and Control-gear, Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units d) EN 50521: Connectors for photovoltaic systems – Safety requirements and tests
IEC 60269-6	Low-voltage fuses - Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems
Surge Arrestors	
IEC 62305-4	Lightening Protection Standard
IEC 60364-5-53/ IS 15086-5 (SPD)	Electrical installations of buildings - Part 5-53: Selection and erection of electrical equipment - Isolation, switching and control

IEC 61643-11:2011	Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods
Cables	
IEC 60227/IS 694, IEC 60502/IS 1554 (Part 1 & 2)/ IEC69947	General test and measuring method for PVC (Polyvinyl chloride) insulated cables (for working voltages up to and including 1100 V, and UV resistant for outdoor installation)
BS EN 50618	Electric cables for photovoltaic systems (BT(DE/NOT)258), mainly for DC Cables
Earthing /Lightning	
IEC 62561 Series (Chemical earthing)	IEC 62561-1: Lightning protection system components (LPSC) - Part 1: Requirements for connection components IEC 62561-2: Lightning protection system components (LPSC) - Part 2: Requirements for conductors and earth electrodes IEC 62561-7: Lightning protection system components (LPSC) - Part 7: Requirements for earthing enhancing compounds
Junction Boxes	
IEC 60529	Junction boxes and solar panel terminal boxes shall be of the thermo-plastic type with IP 65 protection for outdoor use, and IP 54 protection for indoor use
Energy Meter	
IS 16444 or as specified by the DISCOMs	A.C. Static direct connected watt-hour Smart Meter Class 1 and 2 — Specification (with Import & Export/Net energy measurements)
Solar PV Roof Mounting Structure	
IS 2062/IS 4759	Material for the structure mounting

Note: Equivalent standards may be used for different system components of the plants.

Operation and Maintenance Guidelines of Grid Connected PV Plants

1. For the optimal operation of a PV plant, maintenance must be carried out on a regular basis.
2. All the components should be kept clean. It should be ensured that all the components are fastened well at their due place.
3. During mandatory O&M period of 5 years, the rooftop solar PV plant has to be maintained by the vendor for the activity assigned to electrician/technician. The user shall be suitably guided by the vendor for all tasks lying in scope of the user and the user shall also be provided with appropriate documents for such guidance.

Maintenance guidelines for various components viz. solar panels, inverter, wiring etc. are discussed below:

SOLAR PANELS

Although the cleaning frequency for the panels will vary from site to site depending on soiling, it is recommended that

i. The panels are cleaned at least once every fifteen days.
ii. Any bird droppings or spots should be cleaned immediately.
iii. Use water and a soft sponge or cloth for cleaning.
iv. Do not use detergent or any abrasive material for panel cleaning.
v. Iso-propyl alcohol may be used to remove oil or grease stains.
vi. Do not spray water on the panel if the panel glass is cracked or the back side is perforated.
vii. Wipe water from module as soon as possible.
viii. Use proper safety belts while cleaning modules at inclined roofs etc.
ix. The modules should not be cleaned when they are excessively hot. Early morning is particularly good time for module cleaning.
x. Check if there are any shade problems due to vegetation or new building. If there are, make arrangements for removing the vegetation or moving the panels to a shade-free place.
xi. Ensure that the module terminal connections are not exposed while cleaning; this poses a risk of electric shock.
xii. Never use panels for any unintended use, e. g. drying clothes, chips etc.
xiii. Ensure that monkeys or other animals do not damage the panels.

CABLES AND CONNECTION BOXES

i. Check the connections for corrosion and tightness.
ii. Check the connection box to make sure that the wires are tight, and the water seals are not damaged.
iii. There should be no vermin inside the box.

iv. Check the cable insulating sheath for cracks, breaks or burns. If the insulation is damaged, replace the wire
v. If the wire is outside the building, use wire with weather-resistant insulation.
vi. Make sure that the wire is clamped properly and that it should not rub against any sharp edges or corners.
vii. If some wire needs to be changed, make sure it is of proper rating and type.

INVERTER

i. The inverter should be installed in a clean, dry, and ventilated area which is separated from, and not directly above, the battery bank (if applicable).
ii. Remove any excess dust in heat sinks and ventilations. This should only be done with a dry cloth or brush.
iii. Check that vermin have not infested the inverter. Typical signs of this include
iv. Spider webs on ventilation grills or wasps' nests in heat sinks.
v. Check functionality, e.g. automatic disconnection upon loss of grid power supply, at least once a month.
vi. Verify the state of DC/AC surge arrestors, cable connections, and circuit breakers.

SHUTTING DOWN THE SYSTEM

i. Disconnect system from all power sources in accordance with instructions for all other components used in the system.
ii. Completely cover system modules with an opaque material to prevent electricity from being generated while disconnecting conductors.
iii. To the extent possible, system shutdown will not be done during daytime or peak generation.

INSPECTION AND MAINTENANCE SCHEDULE:

Component	Activity	Description	Interval	By
PV Module	Cleaning	Clean any bird droppings/ dark spots on module	Immediately	Beneficiary
	Cleaning	Clean PV modules with plain water or mild dishwashing detergent. Do not use brushes, any types of solvents, abrasives, or harsh detergents.	Fortnightly or as per the site conditions	Beneficiary

	Inspection (for plants > 100 kWp)	Use infrared camera to inspect for hot spots; bypass diode failure	Annual	Technician

Component	**Activity**	**Description**	**Interval**	**By**
PV Array	Inspection	Check the PV modules and rack for any damage. Note down location and serial number of damaged modules.	Annual	User/Technician
	Inspection	Determine if any new objects, such as vegetation growth, are causing shading of the, array and move them if possible.	Annual	User/Technician
	Vermin Removal	Remove bird nests or Vermin from array and rack area.	Need basis	User/Technician
Junction Boxes	Inspection	Inspect electrical boxes for corrosion or intrusion of water or insects. Seal boxes if required. Check position of switches and breakers. Check operation of all protection devices.	Annual	User/Technician
Wiring	Inspection	Inspect cabling for signs of cracks, defects, loose connections, overheating, arcing, short or open circuits, and ground faults.	Annual	User/Technician
Inverter	Inspection	Observe	Quarterly	Electrician
Compone nt	Activity	Description	Interval	By

		Instantaneous operational indicators on the faceplate of the inverter to ensure that the amount of power being generated is typical of the conditions. Inspect Inverter housing or shelter for physical maintenance, if required.		
Inverter	Service	Clean or replace any air filters.	As needed	
Instruments	Validation	Spot-check monitoring instruments pyranometer etc.) with standard instruments to ensure that they are operational and within specifications.	Annual	PV Specialist
Transformer	Inspection	Inspect transformer oil level, temperature gauges, breather, silica gel, meter, connections etc.	Annual	Electrician
Tracker (if present)	Inspection	Inspect gears, gear boxes, bearings as required.	Annual	Technician
	Service	Lubricate tracker mounting bearings, gearbox as required.	Bi-annual	Technician
Plant	Monitoring	Daily Operation and Performance Monitoring	Daily	Beneficiary
Inverter	Inspection	Observe instantaneous operational indicators on the faceplate of the inverter to ensure that the amount of power being generated is typical of the conditions. Inspect Inverter housing or shelter for physical maintenance, if required.	Quarterly	Electrician

Inverter	Service	Clean or replace any air filters.	As needed	Electrician
Instruments	Validation	Spot – check monitoring instruments(pyranometer etc.) with standard instruments to ensure that they are operational and within specifications.	Annual	PV Specialist
Transformer	Inspection	Inspect transformer oil level, temperature gauges, breather, silica gel, meter, connections etc.	Annual	Electrician
Tracker (if present)	Inspection	Inspect gears, gear boxes, bearings as required.	Annual	Technician
	Service	Lubricate tracker mounting bearings, gearbox as required.	Bi-annual	Technician
Plant	Monitoring	Daily Operation and Performance Monitoring	Daily	Beneficiary
Spare Parts	Management	Manage inventory of spare parts.	As needed	Site in charge
Logbook	Documentation	Document all O&M activities in a workbook available to all service personnel	Continuous	Site in charge

Operation and Maintenance Guidelines of Grid Connected PV Plants

i. Periodic cleaning of solar modules, preferably once every fortnight or as per site conditions. As this task has to be done by the beneficiary, the vendors shall apprise the beneficiary on the importance and proper technique for cleaning.

ii. O&M of Solar Power Plant shall be compliant with grid requirements to achieve committed energy generation.

iii. Periodic checks of the Modules, PCUs and BoS shall be carried out as a part of routine preventive and breakdown maintenance.

iv. Immediate replacement of defective Modules, Invertors/PCUs and other equipment as and when required.

v. Supply of all spares, consumables and fixtures as required. Such stock shall be maintained for all associated equipment and materials as per manufacturer/ supplier's recommendations.

vi. All the equipment testing instrument required for Testing, Commissioning and O&M for the healthy operation of the Plant shall be maintained by the Bidder. The testing equipment must be calibrated once every 2 years from NABL accredited labs and the certificate of calibration must be kept for reference as required.

vii. If negligence/ mal operation on part of the Bidder's operator results in failure of equipment, such equipment should be repaired/ replaced by the Bidder free of cost.

Annexure-II

To,

The Addl. Chief Engineer(PPM)/ Chief Engineer (PPM)
Jaipur Vidyut Vitran Nigam Ltd.,
Old Power House Premises, Banipark,
Jaipur-302016

SUB: APPLICATION FOR VENDOR EMPANELMENT FOR SOLAR ROOFTOP ON THE NATIONAL PORTAL FOR ROOFTOP SOLAR IN JAIPUR DISCOM UNDER RTS PROGRAMME PHASE-II.

Ref:- ACE/CE(PPM) office letter/order no..... dt.....

Dear Sir,

With reference to notice/office order regarding "Vendor Empanelment For Solar Rooftop On The National Portal For Rooftop Solar In Jaipur Discom Under RTS Programme Phase-II", I/we hereby confirm that I/we have read the all terms & conditions and further confirm to accept all the terms and conditions in documents.

Thanking You,

Date:

Yours Sincerely,

Name:
Address:

Annexure-

APPLICATION FOR VENDOR EMPANELMENT FOR SOLAR ROOFTOP ON THE NATIONAL PORTAL FOR ROOFTOP SOLAR IN JAIPUR DISCOM UNDER RTS PROGRAMME PH-II

1. Name of firm/Vendor: .....
2. Firm's Address: .....
3. Mobile No.....
4. E-Mail Address.....
5. GSTIN no.....
6. PAN no.....
7. Electrical Contractor License No.(GoR).....& Valid upto.....
8. Details of Documents :

Application form with Declaration form	GSTIN	Electrical Contractor License No.(GoR)	PAN	PBG	Undertaking of Non-blacklisted/debarred

I/we certified that information provided above & the relevant certificates enclosed are true.

Signature of Applicant/Firm(with Seal)

Annexure

Format of Declaration from vendor

1. Name of the Firm_____
2. Legal status of the Firm (Ltd/Pvt/Proprietary/Partnership/LLP) _____.
3. GSTIN number of the Firm_____
4. PAN number of the Firm_____.
5. Provident Fund number of the Firm (if applicable) _____
6. The Firm has sufficient (at least three) technical manpower trained in the skills required to execute the work of installation of rooftop solar plants.
7. The Firm fulfils all statutory requirements, for example those relating to electrical safety, to install rooftop solar plants.
8. The Firm will install rooftop solar plants fulfilling minimum technical standards and specifications issued by the MNRE.
9. The Firm will provide comprehensive maintenance of the rooftop solar plant installed by the Firm for at least 5 years.
10. The Firm will provide all necessary information related to installation of rooftop solar plants and Do's and Don'ts to the beneficiary.
11. The Firm will also provide name, contact number and e-mail of the person where the beneficiary can register a complaint related to rooftop solar plants installed by the Firm. This details will also be made available to the State authorities and MNRE.
12. In case of any discrepancy in terms of quality and services provided by the Firm, the concerned distribution company/Electricity Department can blacklist the Firm and encash the performance bank guarantee, apart from taking other legal actions.
13. The signatory of this declaration is authorised by the Firm and the Firm will abide by all the conditions mentioned above. In case of any misinformation or concealment of facts, appropriate legal action may be taken against the Firm by the affected parties.
14. Along with this declaration, the Firm is submitting a performance bank guarantee of Rs. 2.5 lakh valid for five years.
15. The Firm is willing to work in urban/rural areas of _____, _____, (name of districts).

Authorised Signatory
Name: _____
Designation: _____
Name of the Firm: _____

Undertaking for No Blacklisting & No Banning

To

To,

The Addl. Chief Engineer (PPM)/ Chief Engineer (PPM)
Jaipur Vidyut Vitran Nigam Ltd.,
Old Power House Premises,
Banipark, Jaipur-302016

Sub: Regarding self declaration undertaking for No Blacklisting & No Banning for vendor empanelment for solar rooftop on the national portal for rooftop solar in Jaipur Discom under RTS programme Phase-II.

Ref: ACE/CE(PPM) office letter/order no: ……dated…….

I/ We hereby declare that presently our Company/ Limited Liability Partnership/ Sole Proprietorship is not insolvent, not in receivership, not bankrupt or wound up, not have affairs administered by a court or a judicial officer, not have business activities suspended.

I/ We further declare that presently our Company/ Limited Liability Partnership/ Sole Proprietorship is not blacklisted or debarred by any utility/ government agency, and not have a conflict of interest.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken, our PBG may be forfeited in full and the vendor registration/empanelled for RTS Phase-II, if any to the extent accepted may be cancelled.

(Signature & Seal of Authorized Signatory)

Name of Authorized Signatory:

Designation:

Date:

Place:

Annexure-III

DRAFT FORMAT FOR PERFORMANCE BANK GUARANTEE (PBG)

(On Rajasthan Non-Judicial Stamp worth 0.25% of BG Value subject to Max.up to Rs.25,000/-)

Ref: **Date:-**
Bank Guarantee No:

To,
The Addl. Chief Engineer(PPM)/ Chief Engineer (PPM)
Jaipur Vidyut Vitran Nigam Ltd.,
Old Power House Premises,
Banipark, Jaipur-302016

In consideration of the [***Insert name and address of the Firm***] (hereinafter referred to as 'Firm') submitting the response to MNRE issued the office Memorandum for simplification of procedure Rooftop Solar Programme (RTS) Phase-II vide F.No.318/6/2022-GCRT dtd. 10.06.2022 inter alia for selection of the vendor/firm in response to the this office order no. ..... dated [***Insert the Date of order***] issued by the ***Addl. Chief Engineer(PPM)/Chief Engineer(PPM), JVVNL, Jaipur*** and considering such response to the RFP (if applicable) of [***insert the name of the Firm***] as per the terms and conditions of the RFP and amendments, the [***insert name & address of Bank***] hereby agrees unequivocally, irrevocably and unconditionally to pay to ***the Addl. Chief Engineer(PPM)/Chief Engineer(PPM), JVVNL, Jaipur*** at ***the Addl. Chief Engineer(PPM)/Chief Engineer(PPM) Jaipur Vidyut Vitran Nigam Ltd., Old Power House Premises, Banipark, Jaipur*** forthwith on demand in writing from ***the Addl. Chief Engineer(PPM)/Chief Engineer(PPM), JVVNL, Jaipur*** or any Officer authorized by it in this behalf, any amount upto and not exceeding **Rs. 2,50,000/- (Rs. Two Lakh Fifty Thousand only),** on behalf of M/s. [***Insert name of the Firm***] .

This guarantee shall be valid and binding on this Bank up Five (05) Years from date of issuance of the BG and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to **Rs. 2,50,000/- (Rs. Two Lakh FiftyThousand only).**

Our Guarantee shall remain in force until **[*Insert the Exact Date, completing on 5 Years counting from Date of signing of BG] and the Addl. Chief Engineer (PPM)/Chief Engineer(PPM), JVVNL, Jaipur*** shall be entitled to invoke this Guarantee till **[*Insert the Exact Date, completing on 5 Years counting from Date of signing of BG]***.

The Guarantor Bank hereby agrees and acknowledges that the ***Addl. Chief Engineer(PPM)/Chief Engineer(PPM), JVVNL, Jaipur*** shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by ***the Addl. Chief Engineer(PPM)/Chief Engineer(PPM), JVVNL, Jaipur***, made in any format, raised at the above-mentioned address of the Guarantor Bank, in order to make the said payment to ***the Addl. Chief Engineer(PPM)/Chief Engineer(PPM), JVVNL, Jaipur]***.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by [***Insert name of the Empanelled Firm***] and/or any other person. The Guarantor Bank shall not require t***he Addl. Chief Engineer(PPM)/ Chief Engineer(PPM), JVVNL, Jaipur]*** to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against ***the Addl. Chief Engineer(PPM)/Chief Engineer(PPM), JVVNL, Jaipur]*** in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at **[*Insert the name of City/State*]** shall have exclusive jurisdiction. The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly ***the Addl. Chief Engineer(PPM)/Chief Engineer(PPM), JVVNL, Jaipur*** shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Firm, to make any claim against or any demand on the Firm or to give any notice to the Firm or to enforce any security held by t***he Addl. Chief Engineer(PPM)/Chief Engineer(PPM), JVVNL, Jaipur*** or to exercise, levy or enforce any distress, diligence or other process against the Firm.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to **Rs. 2,50,000/- (Rs. Two Lakh Fifty Thousand only)** and it shall remain in force until **[*Insert the Exact Date, completing on 5 Years counting from Date of signing of BG]*** with an additional claim period of **ninety (90) days** thereafter. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if ***the Addl. Chief Engineer (PPM)/Chief Engineer (PPM), JVVNL, Jaipur*** serves upon us a written claim or demand.

Signature _____

Name_____

For

[**Insert Name of the Bank**] **Banker's**
Stamp and Full Address.

Dated this_____day of_____, 20___

(**Bank Contact Details & E Mail ID is to be provide)**

Witness:

1. …….	2. …….
Signature	Signature
Name and Address	Name and Address

Notes:

1. **The Stamp Paper should be in the name of the Executing Bank and of appropriate value.**
2. The Performance Bank Guarantee (PBG) shall be executed by any of the Bank from the List of Banks enclosed as per Annexure-B.

	राजस्थान राजपत्र विशेषांक	RAJASTHAN GAZETTE Extraordinary
सत्यमेव जयते	साधिकार प्रकाशित	**Published by Authority**
	ज्येष्ठ 25, मंगलवार, *शाके* 1943–जून 15, 2021 *Jyaistha 25, Tuesday, Saka 1943- June 15, 2021*	

भाग-7

विभिन्न विभागों में प्रदायों के लिए टेण्डर मांगने की सूचनाओं को सम्मिलित करते हुये सार्वजनिक और निजी विज्ञापन आदि।

राजस्थान विद्युत विनियामक आयोग

अधिसूचना

जयपुर, अप्रैल 08, 2021

संख्या रा.वि.वि. आयोग/सचिव/विनियम-144 विद्युत अधिनियम 2003 (2003 का 36वां) की धारा 61, 66, 86 (1)(ई) सपठित धारा 181 द्वारा प्रदत शक्तियों और उस निमित उसे प्रभावी बनाने वाली समस्त शक्तियों का प्रयोग करते हुये, राजस्थान विद्युत विनियामक आयोग, पूर्व प्रकाशन के पश्चात्, ग्रिड पारस्परिक क्रिया वितरित अक्षय ऊर्जा उत्पादन तंत्रों के लिये एतद्द्वारा निम्नलिखित विनियम बनाता है।

1 **लघुशीर्षक, प्रयोज्यता तथा प्रारम्भण**

1.1 ये विनियम, ''राजस्थान विद्युत विनियामक आयोग (ग्रिड पारस्परिक क्रिया वितरित अक्षय ऊर्जा उत्पादन तंत्र) विनियम, 2021'' कहलायेंगे।

1.2 ये विनियम सम्पूर्ण राजस्थान राज्य के लिये विस्तारित होंगे।

1.3 ये विनियम शासकीय राजपत्र में इनके प्रकाशन की तिथि से प्रभावी होंगे।

1.4 ये विनियम राजस्थान विद्युत विनियामक आयोग (रूफ टॉप तथा लघु सौर ग्रिड पारस्परिक क्रिया तन्त्र हेतु संयोजित तथा नेट मीटरिंग) विनियम, 2015 और उसके बाद के संशोधनों सहित प्रवृत रहेंगे।

बशर्ते कि 30 जून, 2021 तक नेट मीटरिंग व्यवस्थाओ के अन्तर्गत प्रारम्भ हुए रूफ टॉप तथा लघु सौर ग्रिड पारस्परिक क्रिया तन्त्र राजस्थान विद्युत विनियामक आयोग (रूफ टॉप तथा लघु सौर ग्रिड पारस्परिक क्रिया तन्त्र हेतु संयोजिता तथा नेट मीटरिंग) विनियम, 2015 और उसके पश्चातवर्ती संशोधनों के अनुसार शासित होंगे।

Annexure-IV

2. **परिभाषायें**

2.1 इन विनियमों में, जब तक कि सन्दर्भ द्वारा अन्यथा अपेक्षित नहीं हैः

(क) ''अधिनियम'' से तात्पर्य विद्युत अधिनियम, 2003 (2003 का 36 वां) तथा उसके पश्चातवर्ती संशोधनों से होगा;

(ख) ''बिलिंग चक्र'' या '' बिलिंग अवधि'' से तात्पर्य, आयोग द्वारा निर्धारित उक्त अवधि से होगा, जिसके लिए अनुज्ञप्तिधारी द्वारा उपभोक्ताओं की भिन्न-भिन्न श्रेणियों के लिए नियमित विद्युत बिल तैयार किये जाते है;

(ग) ''चैक मीटर'' का अभिप्राय ऐसे मीटर से है जो करण्ट ट्रांसफार्मर (सीटी) एवं वोल्टेज ट्रांसफार्मर (वीटी) की उन्हीं कोरों से सम्बद्ध होगा, जिससे मुख्य मीटर जुड़ा हुआ है और उसका उपयोग मुख्य नेट मीटर या अक्षय ऊर्जा उत्पादन मीटर की विफलता के मामले में विद्युत के लेखांकन और बिलिंग के लिये किया जायेगा;

(घ) ''आयोग'' से तात्पर्य अधिनियम के अन्तर्गत गठित राजस्थान विद्युत विनियामक आयोग से होगा;

(ड.) ''सम्बन्द्ध भार'' से तात्पर्य उपभोक्ता परिसर पर ऊर्जा उपभोग करने वाले सभी यन्त्रों, जिन्हें एक साथ संचालित किया जा सके, की रेटेड क्षमता के योग से होगा। किन्ही प्रभारों के उद्ग्रहण तथा आपूर्ति वोल्टेज निर्धारित करने के प्रयोजनार्थ, सम्बद्ध भार का विनिर्धारण, राजस्थान विद्युत विनियामक आयोग (विद्युत प्रदाय कोड तथा सम्बद्ध मामले) विनियम, 2021 तथा उसके पश्चातवर्ती संशोधनों में विहित पद्धति के अनुसार किया जायेगा;

(च) ''कनेक्शन अनुबन्ध'' से तात्पर्य वितरण अनुज्ञप्तिधारी तथा उपभोक्ता द्वारा किये गये अनुबन्ध से होगा;

(छ) इन विनियमों के प्रयोजनार्थ ''अनुबंधित मांग'' का अभिप्राय है किलोवाट ('kW') या किलोवोल्ट एम्पीयर ('kVA') या हार्स पावर ('HP') की मांग, जैसा कि वितरण लाइसेंसधारी और उपभोक्ता के बीच पारस्परिक रूप से सहमत है, और राजस्थान विद्युत विनियामक आयोग (विद्युत प्रदाय कोड तथा सम्बद्ध मामलें) विनियम, 2021 और उसके पश्चातवर्ती संशोधनों के अनुसार वितरण अनुज्ञप्तिधारी के साथ समझौते में

यथाप्रविष्ट किया गया है या जहां इस तरह के समझौते में अनुबंध मांग नहीं दी गयी है तो स्वीकृत भार के समान;

(ज) ''वितरण अनुज्ञप्तिधारी'' या ''अनुज्ञप्तिधारी' से तात्पर्य अधिनियम की धारा 14 के अन्तर्गत जिस व्यक्ति को उसके आपूर्ति क्षेत्र में विद्युतापूर्ति हेतु वितरण तन्त्र के संचालन तथा संधारण करने हेतु अनुज्ञप्ति स्वीकृत की गयी हो या अधिनियम की धारा 14 के अनुसार मानित अनुज्ञप्तिधारी व्यक्ति से होगा।

(झ) ''विद्युत प्रदाय कोड'' से तात्पर्य अधिनियम की धारा 50 के अन्तर्गत निर्धारित विद्युत प्रदाय कोड तथा उसके पश्चातवर्ती संशोधनों से होगा।

(ञ) ''पात्र उपभोक्ता'' से तात्पर्य वितरण अनुज्ञप्तिधारी के आपूर्ति क्षेत्र कें विद्युत के किसी उस उपभोक्ता से होगा, जो उपभोक्ता के परिसर से अधिष्ठापित अक्षय ऊर्जा उत्पादन तंत्र का उपभोक्ता की स्वयं की सभी वैद्युतीय आवश्यकताओं के किसी भी भाग के लिये नहीं या सभी या कुछ भाग को ऑफ सेट करने के लिए उपयोग करता है या उपयोग करना प्रस्तावित करता है यह देखते हुए कि ऐसी तंत्र का स्वामित्व और/या संचालन ऐसे उपभोक्ता या वितरण अनुज्ञप्तिधारी या रेस्को द्वारा किया जा सकता है;

(ट) ''वितीय वर्ष'' या ''वर्ष'' से तात्पर्य किसी अंग्रेजी कैलेण्डर वर्ष में अप्रेल के प्रथम दिवस से प्रारम्भ होकर तथा अगले वर्ष के मार्च के इक्कतीसवें दिवस को समाप्त होने वाली अवधि से है;

(ठ) ''अन्तःसम्बन्ध बिन्दू'' का अभिप्राय है पात्र उपभोक्ता के परिसर में नियतमीटर/वितरण अनुज्ञप्तिधारी के कट-आउट/स्वीचगियर के आउट गोइंग टर्मिनलों के साथ अक्षय ऊर्जा उत्पादन तंत्र का इंटरफेसः

बशर्ते कि, उच्च आतति (एचटी) स्तर पर सम्बद्ध पात्र उपभोक्ता के मामले में, ''अन्तःसम्बन्ध बिन्दू'' का अभिप्राय इस प्रकार के उपभोक्ता के उपकरणों के समक्ष वितरण अनुज्ञप्तिधारी के मीटरिंग क्यूबिकल के आउट गोइंग टर्मिनलों के साथ अक्षय ऊर्जा उत्पादन तंत्र के इंटरफेस से होगा;

(ड) ''बिल'' से तात्पर्य वितरण अनुज्ञप्तिधारी द्वारा दिये गये या तो किसी आवर्ती बिल/अनुपूरक बिल या आवर्ती बीजक/अनुपूरक बीजक से है;

(ढ़) ''केवीएएच'' से तात्पर्य किलोवोल्ट एम्पीयर आवर से है;

(ण) ''केडब्ल्यूपी'' से तात्पर्य किलोवाट पीक से है;

(त) ''एमएनआरई'' का अभिप्राय भारत सरकार के नवीन तथा नवीकरणीय ऊर्जा मंत्रालय से है;

(थ) ''नेट बिलिंग'' का अभिप्राय ऐसी व्यवस्था से है जिसके अन्तर्गत अक्षय ऊर्जा उत्पादन तंत्र द्वारा उत्पादित ऊर्जा का वितरण अनुज्ञप्तिधारी द्वारा क्रय किया जाता है और वितरण अनुज्ञप्तिधारी लागू टैरिफ पर कुल उत्पादित विद्युत के लिये क्रेडिट देने के पश्चात् स्वीकृत खुदरा आपूर्ति टैरिफ पर उपभोक्ता का उसके उपभोग के लिये बिल तैयार करता है;

(द) ''नेट मीटर'' से तात्पर्य विद्युत के आयात तथा निर्यात दोनों को अंकित करने वाले द्वि-दिशात्मक ऊर्जा मीटर या विद्युत के आयात तथा निर्यात, यथा स्थिति, प्रत्येक को अंकित कर सकने वाले मीटरों के जोड़े से है;

(ध) ''नेट मीटरिंग व्यवस्था'' का अभिप्राय ऐसी व्यवस्था से है जिसके अन्तर्गत पात्र उपभोक्ता के परिसर पर अधिष्ठापित नेट मीटर के साथ अक्षय ऊर्जा उत्पादन तंत्र, लागू बिलिंग अवधि के दौरान ऐसे अनुज्ञप्तिधारी द्वारा आपूर्ति की गयी विद्युत की मात्रा को पृथक करने के पश्चात् वितरण अनुज्ञप्तिधारी को अधिषेश विद्युत, यदि कोई हो, प्रदान करता है;

(न) ''बाध्यकारी ईकाई (ओबलीगेटेड एन्टीटि)'' से तात्पर्य अधिनियम की धारा 86 की उप-धारा (1) के वाक्यांश (ई) के अन्तर्गत अक्षय क्रय बाध्यता पूरी करने तथा राविविआ (अक्षय ऊर्जा प्रमाण पत्र तथा अक्षय क्रय बाध्यता अनुपालना तथा ढॉचा) विनियम, 2010 एवं यथा संशोधित के अन्तर्गत, अभिज्ञात आदेशाधीन ईकाई से है;

(प) ''परिसर'' से तात्पर्य भूमि, रूफ टॉप या भवन या अवसंरचना (इन्फ्रास्ट्रक्चर) या हिस्से या उनके संयोजन पर तथा उत्थापित क्षेत्र, जिनके लिये वितरण अनुज्ञप्तिधारी द्वारा विद्युत की आपूर्ति हेतु पृथक मीटर या मीटरिंग व्यवस्था की गयी है, से है;

(फ) ''अक्षय ऊर्जा प्रमाण पत्र (आरइसी)'' से तात्पर्य केन्द्रीय विद्युत विनियामक आयोग (नवीकरणीय ऊर्जा उत्पादन के लिये नवीकरणीय ऊर्जा प्रमाण पत्र की मान्यता तथा उन्हें जारी करने के लिये निबन्धन तथा शर्तें) विनियम, 2010 तथा उसके पश्चातवर्ती संशोधनों के अनुसार, जारी किये प्रमाण पत्र से है;

(ब) ''अक्षय ऊर्जा उत्पादन तंत्र'' का अभिप्राय पारम्परिक उत्पादन तंत्रो के अतिरिक्त उन उत्पादन तंत्रो से है जो अक्षय ऊर्जा स्त्रोतों से, भंडारण सहित या भंडारण के बिना विद्युत का उत्पादन कर रहे हैं;

(भ) ''अक्षय ऊर्जा स्त्रोत'' का इन विनियमों के प्रयोजनार्थ, अभिप्राय पन, पवन, सौर, बायोमास, बैगास, नगरपालिका ठोस अपशिष्ट तथा इस प्रकार के अन्य स्त्रोत से हैं जो एमएनआरई द्वारा समय-समय पर यथानुमोदित है;

(म) ''रेस्को'' का अभिप्राय अक्षय ऊर्जा सेवा कम्पनी से है जिसके पास अक्षय ऊर्जा तंत्र का स्वामित्व है और उपभोक्ता को अक्षय ऊर्जा प्रदान करती है;

बशर्ते कि वितरण अनुज्ञप्तिधारी यथा रेस्को के कार्य कर सकता है। तथापि, इस व्यवसाय को वितरण अनुज्ञप्तिधारी के अन्य व्यवसाय के रूप में माना जायेगा;

(य) ''अक्षय ऊर्जा उत्पादन मीटर'' अभिप्राय ऐसे ऊर्जा मीटर से है जिसका उपयोग लेखांकन और बिलिंग के उदेश्य से अक्षय ऊर्जा उत्पादन तंत्र द्वारा उत्पन्न ऊर्जा को मापने के लिये किया जाता है;

(र) ''स्वीकृत भार'' का अभिप्राय किलोवाट या हार्स पावर में मांग से है जो कि वितरण अनुज्ञप्तिधारी और उपभोक्ता के मध्य पारस्परिक रूप से सहमत है;

(ल) ''निपटान की अवधि'' का अभिप्राय उस अवधि से है जिसके अंत में वितरण अनुज्ञप्तिधारी और उपभोक्ता के मध्य नेट मीटरिंग/नेट बिलिंग निपटारा होता है, जो सामान्यतः एक कैलेण्डर वर्ष के अप्रेल के पहले दिन से प्रारम्भ होता है और अगले कैलेण्डर वर्ष के मार्च के इक्कतीसवें दिन के साथ समाप्त होता है;

(व) ''भंडारण'' का अर्थ है ऊर्जा भंडारण तंत्र जिसमें ऊर्जा के विभिन्न रूपों को संग्रहीत करने और संग्रहीत ऊर्जा को विद्युत के रूप में वितरित करने के लिए ठोस अवस्था बैटरी, फ्लो बैटरी, पंप किये गये भंडारण, संपीड़ित वायु, ईंधन सेल, हाइड्रोजन भंडारण जैसी विधियों और प्रौद्योगिकियों या कोई अन्य प्रौद्योगिकी का उपयोग किया जाता हैः

2.2 इन विनियमों में प्रयुक्त और इनमें परिभाषित नहीं किये गये परन्तु अधिनियम या आयोग के किन्हीं अन्य विनियमों में परिभाषित शब्दों एवं अभिव्यक्तियों का अभिप्राय वही होगा जो अधिनियम या आयोग के किन्हीं अन्य विनियमों में नियत किया गया है।

2.3 इन विनियमों में उपयोग में लिये गये संक्षेपणों का अर्थ वहीं होगा जो अनुलग्नक-I में उल्लेखित है।

3. **विषय क्षेत्र तथा प्रयोज्यता**

3.1 ये विनियम राजस्थान राज्य में वितरण अनुज्ञप्तिधारी तथा ऐसे वितरण अनुज्ञप्तिधारी के आपूर्ति के क्षेत्र में आपूर्ति का उपभोग कर रहे उपभोक्ताओ पर प्रयुक्त होंगे।

3.2 ये विनियम निम्न पर लागू होंगेः

(क) नेट मीटरिंग व्यवस्थाये,

(ख) नेट बिलिंग व्यवस्थाये,

(ग) मीटर के पीछे सम्बद्ध ग्रिड पारस्परिक क्रिया वितरित अक्षय ऊर्जा उत्पादन तंत्र जो वितरण अनुज्ञप्तिधारी के ग्रिड के साथ समानान्तर संचालित हो रहा है और जिसने नेट मीटरिंग व्यवस्था या नेट बिलिंग व्यवस्था के विकल्प का चयन नहीं किया हैः

बशर्ते कि नेट मीटरिंग व्यवस्था के लिये पात्रता समय-समय पर संशोधित विद्युत (उपभोक्ता के अधिकार) नियम, 2020 के अन्तर्गत निर्देशित के अनुसार होगीः

बशर्ते यह भी कि विद्युत (उपभोक्ता के अधिकार) नियम, 2020 के कार्यान्वहन के प्रयोजनार्थ यदि आवश्यक हो तो आयोग, जैसे ही और जब अपेक्षित हो, आवश्यक या आदेश जारी कर सकता हैः

बशर्ते यह भी कि पात्र उपभोक्ताओं के लिये नेट मीटरिंग व्यवस्था को तकनीकी व्यवहार्यता के अध्यधीन अनुमत किया जायेगाः

बशर्ते यह भी कि एक मेगावाट अधिष्ठापित क्षमता तक के सह-स्थित अक्षय ऊर्जा आधारित कैप्टिव विद्युत संयंत्र इन विनियमों या राजस्थान विद्युत विनियामक आयोग (अक्षय ऊर्जा स्त्रोंतो से टैरिफ विनिर्धारण हेतु निबन्धन एवं शर्ते) विनियम, 2020 के अधीन स्थापित होने के विकल्प का चयन कर सकते हैः

बशर्ते यह भी कि ऐसा विकल्प, एक बार चुनने के पश्चात् बदला नहीं जा सकता है।

3.3 पात्र उपभोक्ता विनियम 3.2 के अधीन परन्तुक के अध्यधीन नेट मीटरिंग व्यवस्था या नेट बिलिंग व्यवस्था के अन्तर्गत अक्षय ऊर्जा उत्पादन तंत्र स्थापित कर सकते है जो कि

(क) इन विनियमो के अन्तर्गत, यथापरिभाषित अनुज्ञेय तकनीकी सीमाओं के अन्दर-अन्दर होगी,

(ख) उपभोक्ता के परिसर पर अवस्थित होगी,

(ग) उपभोक्ता परिसर के अर्न्तसम्बन्ध बिन्दू पर जुडेगी और वितरण अनुज्ञप्तिधारी के नेटवर्क के साथ समानान्तर सुरक्षित रूप से संचालित होगी।

3.4 ये विनियम सभी ग्रिड पारस्परिक क्रिया वितरित अक्षय ऊर्जा उत्पादन तंत्र जो 1 जुलाई 2021 को या उसक पश्चात् कमीशन हुए हैं, पर लागू होंगे।

बशर्ते कि 30 जून 2021 तक नेट मीटरिंग व्यवस्था के अन्तर्गत प्रारम्भ हुए रूफ टॉप एवं लघु सौर ग्रिड पारस्परिक क्रिया तंत्रों राजस्थान विद्युत विनियामक आयोग (रूफ टॉप तथा लघु सौर ग्रिड पारस्परिक क्रिया तन्त्र हेतु संयोजित तथा नेट मीटरिंग) विनियम, 2015 और उसके पश्चातवर्ती संशोधनों के प्रावधानों के अनुसार कनेक्शन समझौते की अवधि तक नेट मीटरिंग व्यवस्था के अधीन कार्य करती रहेगी।

बशर्ते यह भी कि उपभोक्ता जिसने इन विनियमों की अधिसूचना के पूर्व या पश्चात् नेट मीटरिंग व्यवस्था के लिये विकल्प चुना है, को नेट मीटरिंग व्यवस्था के अधीन विद्यमान कनेक्शन समझौते के समापन के पश्चात् ही नेट बिलिंग व्यवस्था में प्रविष्ट होने की अनुमति दी जायेगी।

3.5 ये विनियम राज्य (नोडल) एजेन्सी या राज्य के वितरण अनुज्ञप्तिधारी के वैकल्पिक कार्यविधि के माध्यम से, 1 मेगावाट या अधिक क्षमता के अक्षय ऊर्जा उत्पादन तंत्र को प्रारम्भ करने के अधिकार को प्रतिबंधित नहीं करते हैं।

4. **सामान्य सिद्धान्त**

4.1 वितरण अनुज्ञप्तिधारी, उस उपभोक्ता, जो इसके आपूर्ति के क्षेत्र में पारस्परिक वितरित अक्षय ऊर्जा उत्पादन तंत्र अधिष्ठापित करने की ईच्छा व्यक्त करता है, को नेट बिलिंग व्यवस्था या नेट मीटरिंग व्यवस्था के प्रावधान, अभेदात्मक तथा ''पहले आओ पहले पाओ'' के आधार पर प्रदान करेगा।

बशर्ते कि उपभोक्ता इन विनियमों के अन्तर्गत, यथानिर्धारित तकनीकी सीमा के अध्यधीन ग्रिड पारस्परित वितरित अक्षय ऊर्जा उत्पादन तंत्र अधिष्ठापित करने के लिये पात्र है।

बशर्ते यह भी कि ऐसे तन्त्र का ग्रिड के साथ अन्तर्सम्बन्ध इन विनियमों के अन्तर्गत यथानिर्धारित और समय-समय पर यथा संशोधित केन्द्रीय विद्युत प्राधिकरण (वितरित विद्युत उत्पादन संसाधनों के संयोजन के लिये तकनीकी मानक) विनियम, 2013 की अनुपालना में किया जायेगा।

4.2 वितरण अनुज्ञप्तिधारी के पास बकाया राशि वाले उपभोक्ता इन विनियमों के अधीन नेट बिलिंग व्यवस्था या नेट मीटरिंग व्यवस्था के लिये पात्र नहीं होंगेः

बशर्ते कि जहां विद्युत के लिये किसी भी प्रभार से सम्बन्धित वितरण अनुज्ञप्तिधारी और उपभोक्ता के मध्य कोई विवाद है, ऐसे उपभोक्ता को अधिनियम की धारा 56 के अनुसार वितरण अनुज्ञप्तिधारी के पास विवादित राशि जमा कराने पर ऐसे विचाराधीन विवाद के समाधान के बकाया रहते हुए नेट मीटरिंग या नेट बिलिंग व्यवस्था की अनुमति दी जायेगी।

5. **रेस्को द्वारा स्थापित ग्रिड पारस्परिक क्रिया वितरित अक्षय ऊर्जा उत्पादन तंत्र**

5.1 विद्युत अधिनियम, 2003 के प्रावधानों के अनुसार, व्यक्तिगत उपभेक्ताओं को विद्युत का विक्रय केवल वितरण अनुज्ञप्तिधारी, टेडिंग अनुज्ञप्तिधारी या खुला अभिगम के माध्यम से ही अनुमत किया जाता है। तथापि, अक्षय ऊर्जा उत्पादन को प्रोत्साहन देने के लिये, अक्षय ऊर्जा उत्पादन तंत्र के स्वामित्व वाली अक्षय ऊर्जा सेवा कम्पनी (रेस्को) के माध्यम से नेट मीटरिंग और नेट बिलिंग व्यवस्था की अनुमति दी जायेगीः

बशर्ते कि पात्र उपभोक्ता नेट बिलिंग व्यवस्था या नेट मीटरिंग व्यवस्था के अन्तर्गत अक्षय ऊर्जा उत्पादन तंत्र की स्थापना के लिये रेस्को को पारस्परिक वाणिज्यिक व्यवस्था के अन्तर्गत रूफटाप (छत) जगह/भूमि/जल निकायों को पटटे/किराये पर दे सकते हैः

बशर्ते यह भी कि नेट मीटरिंग और नेट बिलिंग व्यवस्था के अन्तर्गत, रेस्को अपने भुगतान के सम्बन्ध में उपभोक्ता के साथ सीधे ही समझौता करेगा। रेस्को, उपभोक्ता और वितरण अनुज्ञप्तिधारी के मध्य कोई त्रिपक्षीय समझौता नहीं होगा। यहां तक कि रेस्कों के मामले में, नेट मीटरिंग/नेट बिलिंग समझौता वितरण अनुज्ञप्तिधारी और पात्र उपभोक्ता के मध्य निष्पादित होगाः

बशर्ते यह भी कि प्रत्यक्ष समझौते के अधीन संविदात्मक दायित्वों से उत्पन्न हुए उपभोक्ता एवं रेस्को के मध्य विवाद उनके द्वारा पारस्परिक रूप से निपटाया जायेगा और आयोग या वितरण अनुज्ञप्तिधारी द्वारा अधिनिर्णीत नहीं किया जायेगा। वितरण अनुज्ञप्तिधारी, ऐसे विवाद का पक्षकार नहीं होगा और उपभोक्ता एवं रेस्को के मध्य ऐसे विवाद से उत्पन्न होने वाले आधार पर ऐसे उपभोक्ता का विद्युत सम्बन्ध का विच्छेदन नहीं करेगा।

5.2 इन विनियमों के अधीन सभी प्रावधान रेस्को द्वारा स्थापित अक्षय ऊर्जा उत्पादन तंत्र के लिये लागू होंगे।

6. **अक्षय ऊर्जा उत्पादन तंत्र की संयोजिता (कनेक्टीविटी)**

6.1 किसी ट्रान्सफार्मर विशेष पर अक्षय ऊर्जा उत्पादन तंत्र की संचयी क्षमता ऐसे वितरण ट्रान्सफार्मर की क्षमता के 50 प्रतिशत या समय-समय पर आयोग द्वारा निर्धारित की जाने वाली ऐसी सीमा से अधिक नहीं होगीः

बशर्ते कि उच्च आतिति उपभोक्ताओं के मामलें में, जहां पर वितरण ट्रांसफार्मर उपभोक्ता द्वारा अधिष्ठापित किया गया है, 50 प्रतिशत वितरण ट्रांसफार्मर क्षमता की सीमा लागू नहीं होगी। ऐसे उपभोक्ताओं के लिये कुल स्वीकार्य स्थापना क्षमता इन विनियमों के विनियम 7.2 के अनुसार होगी।

6.2 वितरण अनुज्ञप्तिधारी नेट बिलिंग व्यवस्था या नेट मीटरिंग व्यवस्था के अन्तर्गत अक्षय ऊर्जा उत्पादन तंत्र को जोड़ने के लिये उपलब्ध वितरण ट्रांसफार्मर स्तर की क्षमता के बारे में सूचना को वार्षिक आधार पर अद्यतन करेगा और सूचना को अपनी वेबसाइट पर प्रदशित करेगा।

7. **पात्र उपभोक्ता तथा व्यष्टि परियोजना क्षमता**

7.1 वितरण अनुज्ञप्तिधारी के आपूर्ति के क्षेत्र में विद्युत के, अक्षय ऊर्जा उत्पादन तंत्र रखने या अधिष्ठापना प्रस्तावित करने वाले सभी पात्र उपभोक्ता, इन विनियमों, के अनुसार नेट बिलिंग व्यवस्था या नेट मीटरिंग व्यवस्था के अध्यधीन ग्रिड संयोजिता के लिये विकल्प दे सकते है।

7.2 किसी भी पात्र उपभोक्ता के परिसर पर अधिष्ठापित किये जाने वाले अक्षय ऊर्जा उत्पादन तंत्र की अधिकतम क्षमता, उपभोक्ता के/की स्वीकृत सम्बद्ध भार/संविदा मांग के 100 प्रतिशत से अधिक नहीं होगी।

बशर्ते कि अक्षय ऊर्जा उत्पादन तंत्र की क्षमता, राजस्थान विद्युत विनियामक आयोग (विद्युत प्रदाय कोड तथा सम्बद्ध मामले) विनियम, 2021 तथा उसके पश्चातवर्ती संशोधनो के अन्तर्गत, अनुज्ञेय स्वीकृत भार या संविदा मांग से सम्बन्धित प्रावधानो के अनुरूप होगी।

7.3 किसी भी पात्र उपभोक्ता के परिसर में अधिष्ठापित किये जाने वाली अक्षय ऊर्जा उत्पादन तंत्र की क्षमता विनियम 7.2 में यथा निर्धारित शर्तो के अध्याधीन नेट मीटरिंग व्यवस्था या नेट बिलिंग व्यवस्था के अन्तर्गत एक किलोवाट से अधिक होगी।

बशर्ते कि किसी भी पात्र उपभोक्ता के परिसर में अधिष्ठापित किये जाने वाले अक्षय ऊर्जा उत्पादन तंत्र की क्षमता नेट बिलिंग व्यवस्था या नेट मीटरिंग व्यवस्था के अन्तर्गत एक मेगावाट तक होगी।

बशर्ते यह भी कि यदि पात्र उपभोक्ता एक मेगावाट से अधिक की क्षमता वाली अक्षय ऊर्जा उत्पादन तंत्र को अधिष्ठापित करने का आशय रखता है तो ऐसी व्यवस्थाओं के निबन्धन एवं शर्ते राजस्थान विद्युत विनियामक आयोग (अक्षय ऊर्जा स्त्रोंतो से टैरिफ विनिर्धारण हेतु निबन्धन एवं शर्ते) विनियम, 2020 और उसके पश्चातवर्ती संशोधनों से शासित होगी।

7.4 किसी भी पात्र उपभोक्ता के परिसर में अधिष्ठापित किये जाने वाली अक्षय ऊर्जा उत्पादन तंत्र की क्षमता की अधिकतम क्षमता इन विनियमों में यथा विनिर्दिष्ट सम्बन्धित वितरण ट्रांसफार्मर की संचयी क्षमता जो कि पहले से ही उपयोग की गयी है, के अध्यधीन होगी।

7.5 उच्च आतति (11 केवी और अधिक) उपभोक्ता अक्षय ऊर्जा उत्पादन तंत्र को स्थापित कर सकते है और अपनी एलटी बस-बार प्रणाली से जोड़ सकते है।

बशर्ते कि इन मामलों में, अक्षय ऊर्जा उत्पादन मीटर या नेट मीटर को उपभोक्ता के ट्रांसफार्मर की उच्च आतति की ओर अधिष्ठापित किया जायेगा।

7.6 पात्र उपभोक्ता उचित प्रक्रिया का पालन करने और संबंधित वितरण अनुज्ञप्तिधारी को सूचित करने के पश्चात् एक ही परिसर के भीतर विभिन्न स्थानों पर अक्षय ऊर्जा उत्पादन तंत्रों को स्थापित कर सकता है या उनकी क्षमता में वृद्धि कर सकता है या उन्नत कर सकता हैः

बशर्ते कि एक ही परिसर के भीतर ऐसे तंत्रों की कुल क्षमता इन विनियमों में निर्दिष्ट क्षमता सीमाओं से अधिक नहीं होगी।

Annexure-IV

8. **आवेदन हेतु प्रक्रिया**

8.1 वितरण अनुज्ञप्तिधारी अपनी वेबसाइट पर और अपने सभी कार्यालयों में नोटिस बोर्ड पर निम्नलिखित को प्रमुखता से प्रदर्शित करेगाः

(क) नयी व्यवस्था को स्वीकृत करने के लिये विस्तृत प्रक्रिया;

(ख) जहां भरे हुए आवेदन फार्म प्रस्तुत किये जा सकते है, उन कार्यालयों के पते और दूरभाष नम्बर;

(ग) आवेदन फार्म की ऑनलाइन प्रस्तुति के लिये वेबसाइट का पता;

(घ) आवेदन के साथ संलग्न किये जाने वाले अपेक्षित दस्तावेजों की प्रति की पूर्ण सूची;

(ड.) आवेदक द्वारा जमा कराये जाने वाले सभी प्रयोज्य शुल्क।

8.2 वितरण अनुज्ञप्तिधारी इन विनियमों की अधिसूचना की दिनांक के तीन (3) माह के भीतर पात्र उपभोक्ताओं के आवेदन पर कार्यवाही के लिये वेब आधारित आवेदन संसाधन प्रणाली लागू करेगाः

बशर्ते कि वितरण अनुज्ञप्तिधारी मैनुअल सिस्टम से प्राप्त होने वाले आवेदनों को तब तक संसाधित करेगा जब तक कि ऐसी वेब प्रणाली विकसित न हो जायेः

बशर्ते यह भी कि वितरण अनुज्ञप्तिधारी ऑनलाइन आवेदन पत्र प्रस्तुत करने के लिये वेबपोर्टल और मोबाइल ऐप का सृजन करेगा।

8.3 पात्र उपभोक्ता, जो उसके परिसर में अक्षय ऊर्जा उत्पादन तंत्र अधिष्ठापित करना प्रस्तावित करता है, आवेदन पत्र (अनुलग्नक-।।) में आवेदन करेगा, जिसे वितरण अनुज्ञप्तिधारी इन विनियमों की अनुसूची (अनुलग्नक-।।।) में यथानिर्धारित आवेदन शुल्क के साथ अपनी बेवसाइट पर अधिसूचित करेगा।

8.4 उपभोक्ता आवेदन के साथ ई-मेल पते और मोबाइल नंबर का विवरण अनिवार्य रूप से प्रदान करेगा।

8.5 वितरण अनुज्ञप्तिधारी द्वारा उपभोक्ता के साथ सभी पत्राचार अधिमानतः ई-मेल और मोबाइल के माध्यम से किया जाएगा।

8.6 वितरण अनुज्ञप्तिधारी आवेदन प्राप्ति की अभिस्वीकृति देगा तथा आवेदन को पंजीकृत करेगा और आवेदन को प्राप्ति के क्रम में संधारित करेगा।

8.7 वेब-आधारित अनुप्रयोग या मोबाइल ऐप के माध्यम से या एसएमएस के माध्यम से या किसी अन्य विधि द्वारा आवेदन के प्रसंस्करण की स्थिति की निगरानी के लिये वितरण अनुज्ञप्तिधारी द्वारा एक अद्वितीय पंजीकरण संख्या के आधार पर ऑनलाइन टैकिंग तंत्र प्रदान किया जायेगा।

8.8 आवेदन की पावती जारी होने के बीस (20) दिनों के भीतर, वितरण अनुज्ञप्तिधारी के संबंधित उप-विभागीय कार्यालय के संबंधित अधिकारी अक्षय ऊर्जा उत्पादन तंत्र की तकनीकी व्यवहार्यता की जांच करेगा।

8.9 यदि तकनीकी व्यवहार्यता संतोषजनक पाई जाती है, तो वितरण अनुज्ञप्तिधारी आवेदन को स्वीकृत करेगा और आवेदक को आवेदन पत्र की पावती जारी करने के तीस (30) दिनों के भीतर ईमेल/एसएमएस/पोस्ट के माध्यम से स्वीकृत पत्र (एलओए) प्रदान करते हुए उसे सूचित करेंगा।

8.10 तकनीकी अध्ययन के दौरान, इन विनियमों के अन्तर्गत निर्दिष्ट अक्षय ऊर्जा उत्पादन तंत्र की क्षमता और ट्रांसफार्मर लोडिंग के कारण, आवेदन में पाई गई किसी भी कमी के मामले में, आवेदन पत्र की पावती जारी करने के बीस (20) दिनों के भीतर ईमेल/एसएमएस/पोस्ट के माध्यम से आवेदक को वितरण अनुज्ञप्तिधारी द्वारा सूचित किया जाएगा।

8.11 आवेदक सूचना प्राप्ति से पंद्रह (15) दिनों की अवधि के भीतर सभी परिलक्षित कमियों को दूर करेगा और ईमेल/पोस्ट के माध्यम से कमियों के समाधान के बारे में वितरण अनुज्ञप्तिधारी को सूचित करेंगाः

बशर्ते कि वितरण अनुज्ञप्तिधार कमियों के समाधान का आकलन करेगा और अपनी संतुष्टि पर आवेदक को स्वीकृत पत्र (एलओए) प्रदान करेगाः

बशर्ते यह भी कि यदि उक्त अवधि में कमियों को दूर नहीं किया जाता है, तो आवेदन रद्द कर दिया जाएगाः

बशर्ते यह भी कि कमियों को सुधारने के बाद उपभोक्ता पुनः आवेदन कर सकता हैः

बशर्ते यह भी कि यदि अपर्याप्त वितरण ट्रांसफार्मर की क्षमता या किसी अन्य तकनीकी बाधाओं के कारण मंजूरी नहीं दी जा सकती है, तो उपभोक्ता को केवल लिखित संचार के माध्यम से अस्वीकृति के कारणों को निर्दिष्ट करते हुए सूचित किया जाना चाहिएः

बशर्ते यह भी कि यदि उपभोक्ता ऐसा विकल्प देता है, तो वरिष्ठता के तिथिक्रमानुसार क्रम में और इस तरह की वितरण ट्रांसफार्मर की क्षमता उपलब्ध होने/तकनीकी बाधा ठीक होने के पश्चात् आवेदन पर विचार किया जा सकता है।

8.12 अक्षय ऊर्जा उत्पादन तंत्र की स्थापना के बाद, उपभोक्ता वितरण अनुज्ञप्तिधारी को स्थापना प्रमाण पत्र प्रस्तुत करेगा। वितरण अनुज्ञप्तिधारी अनुबंध समझौते पर हस्ताक्षर, मीटर की स्थापना और अक्षय ऊर्जा उत्पादन तंत्र के सफल कमीशनिंग, आयोग द्वारा निर्दिष्ट समय सीमा के भीतर पूरा करेगा जो कि स्थापना प्रमाण पत्र जमा करने की तारीख से तीस दिनों से अधिक नहीं होगी। अनुबंध समझौते और स्थापना प्रमाण पत्र के प्रारूप वितरण अनुज्ञप्तिधारी के वेब-पोर्टल पर प्रदर्शित किये जायेंगे।

8.13 उपभोक्ता के पास स्वयं के द्वारा अपेक्षित मीटर खरीदने का विकल्प होगा, जिसका वितरण अनुज्ञप्तिधारी द्वारा परीक्षण और स्थापना की जायेगी।

8.14 पात्र उपभोक्ता स्वीकृति पत्र (एलओए) प्राप्त करने के एक सौ अस्सी (180) दिनों या वितरण अनुज्ञप्तिधारी द्वारा जैसा करार पाया जाये या उसके द्वारा सहमत विस्तारित अवधि के भीतर इन विनियमों के अन्तर्गत निर्दिष्ट मानकों/संहिताओं के अनुसार अक्षय ऊर्जा उत्पादन तंत्र स्थापित करेगाः

बशर्ते कि यदि पात्र उपभोक्ता उपर्युक्त अवधि के भीतर अधिष्ठापन को स्थापित करने में विफल रहता है, तो अनुमोदन रद्द माना जाएगा, और पात्र उपभोक्ता को फिर से आवेदन करना होगा।

9. **कनेक्शन समझौता**

9.1 वितरण अनुज्ञप्तिधारी और पात्र उपभोक्ता वितरण नेटवर्क के साथ अक्षय ऊर्जा उत्पादन तंत्र की कनेक्टिविटी की मंजूरी के बाद, लेकिन सिस्टम से वास्तविक उत्पादन की शुरूआत से पहले नेट बिलिंग व्यवस्था या नेट मीटरिंग व्यवस्था के लिए कनेक्शन समझौता करेंगे।

9.2 मॉडल नेट बिलिंग कनेक्शन समझौता और नेट मीटरिंग कनेक्शन समझौता अनुलग्नक- IV.अ और अनुलग्नक- IV.ब पर दिया गया है जिन्हें वितरण अनुज्ञप्तिधारी इन विनियमों की सुसंगति के अधीन, उपयुक्त रूप से संशाधित कर सकता है।

9.3 वितरण अनुज्ञप्तिधारी इन विनियमों की अधिसूचना के दो महिने के भीतर लागू प्रक्रिया और आवेदन और अन्य प्रासंगिक फार्मा के साथ, अपनी वेबसाइट पर समझौता/अनुबंध प्रारूप उपलब्ध कराएगा।

9.4 कनेक्शन समझौता पच्चीस (25) वर्षों तक लागू रहेगाः

बशर्ते कि इन विनियमों की अधिसूचना से पहले नेट मीटरिंग व्यवस्था के अन्तर्गत किया गया कनेक्शन समझौता उस अवधि के लिए मान्य होगा जैसा कि उक्त कनेक्शन समझौते मे निर्धारित हैः

बशर्ते यह भी कि इन विनियमों की अधिसूचना के पहले नेट मीटरिंग व्यवस्था के अन्तर्गत किए गए कनेक्शन समझौते के लिए, जहां कनेक्शन अनुबंध में अवधि की वैधता प्रदान नहीं की गई है, नेट मीटरिंग व्यवस्था ऐसे कनेक्शन समझौते में प्रवेश करने की तारीख से पच्चीस (25) वर्ष के लिए मान्य होगीः

बशर्ते यह भी कि परस्पर सहमति से किसी भी समय समझौते को समाप्त किया जा सकता है।

9.5 समझौते की समाप्ति पर पात्र उपभोक्ता, वितरण अनुज्ञप्तिधारी के नेटवर्क से अपने अक्षय ऊर्जा उत्पादन तंत्र को अविलंब विच्छेद कर देगा।

10. ग्रिड के साथ अन्तर्सम्बन्धः मानक तथा सुरक्षा

10.1 अक्षय ऊर्जा उत्पादन तंत्र तथा उपकरण, इन विनियमों तथा समय-समय पर यथा संशोधित, निम्नलिखित विनियमों व कोड़ो के अनुरूप होंगे-

(क) केन्द्रीय विद्युत प्राधिकरण (वितरित विद्युत उत्पादन संसाधनों के संयोजन के लिये तकनीकी मानक) विनियम, 2013

(ख) केन्द्रीय विद्युत प्राधिकरण (मीटरों का अधिष्ठापन एवं प्रचालन) विनियम, 2006

(ग) केन्द्रीय विद्युत प्राधिकरण (सुरक्षा तथा विद्युत आपूर्ति संबंधी उपाय) विनियम, 2010

(घ) राविविआ (विद्युत प्रदाय कोड तथा सम्बद्ध मामले) विनियम, 2021

10.2 संतोषजनक कार्य की पुष्टि करने के लिए उपभोक्ता अपने परिसर में उपकरण को आपूर्तिकर्ता के प्रतिनिधि द्वारा स्थापित करवायेगाः

बशर्ते कि अक्षय ऊर्जा उत्पादन तंत्र के उपकरण का आपूर्तिकर्ता द्वारा पूर्व-परीक्षण किया जायेगा और संबंधित उपकरण के लिए परीक्षण प्रमाण पत्र उपभोक्ता को प्रदान किया जाएगाः

बशर्ते यह भी कि अक्षय ऊर्जा उत्पादन तंत्र से उत्पादित विद्युत की गुणवता सुनिश्चित करने के लिए लागू मानकों के अनुसार परीक्षण किए जाएंगे।

10.3 कनेक्टिविटी स्तर जिस पर अक्षय ऊर्जा उत्पादन तंत्र को ग्रिड से जोडा जायेगा, विनियम 7 के अध्यधीन समय-समय पर यथा संशोधित राविविआ (विद्युत प्रदाय कोड तथा सम्बद्ध मामले) विनियम, 2021 के अनुसार होगा।

10.4 उपभोक्ता, जो अक्षय ऊर्जा उत्पादन तंत्र स्थापित करता है, इंटरकनेक्शन प्वाइंट तक अपने सिस्टम के सुरक्षित संचालन, रखरखाव और दोष के सुधार के लिए जिम्मेदार होगा और उससे आगे, मीटरिंग व्यवस्था सहित तंत्र के सुरक्षित संचालन, रखरखाव और किसी भी दोष के सुधार की जिम्मेदारी वितरण अनुज्ञप्तिधारी की होगीः

बशर्ते कि वितरण अनुज्ञप्तिधारी उचित समय के भीतर दोष को ठीक करने के लिए अक्षय ऊर्जा उत्पादन तंत्र को कह सकता है।

10.5 पात्र उपभोक्ता किसी भी घटना (घातक/गैर-घातक/विभागीय/ गैर-विभागीय) के लिए पूरी तरह से जिम्मेदार होगा जो ग्रिड की आपूर्ति बंद होने पर अक्षय ऊर्जा उत्पादन तंत्र से बैक फीडिंग के कारण हो सकती हैः

बशर्ते कि वितरण अनुज्ञप्तिधारी के पास किसी भी समय इस तरह की आपातकाल की स्थिति में मानव और सामग्री की क्षति को रोकन के लिए उपभोक्ता की स्थापना को डिस्कनेक्ट करने का अधिकार सुरक्षित है।

10.6 पात्र उपभोक्ता भंडारण के साथ या उसके बिना अक्षय ऊर्जा उत्पादन तंत्र स्थापित कर सकता हैः

बशर्ते कि आपूर्ति का कोई भी वैकल्पिक स्रोत उपभोक्ता के नेटवर्क तक सीमित रहेगा और वितरण अनुज्ञप्तिधारी की ग्रिड आपूर्ति में विफलता पर वितरण अनुज्ञप्तिधारी की एलटी ग्रिड तक विस्तारित बैटरी पावर/डीजल जनरेटर पावर/बैकअप पावर को रोकने के लिए उपभोक्ता पर्याप्त सुरक्षा उपाय करने के लिए जिम्मेदार होगा।

10.7 वितरण अनुज्ञप्तिधारी को निम्नलिखित परिस्थितियों में किसी भी समय अपने सिस्टम से अक्षय ऊर्जा उत्पादन तंत्र को डिस्कनेक्ट करने का अधिकार होगाः

(क) वितरण अनुज्ञप्तिधारी की विद्युत प्रणाली पर आपात स्थिति या रखरखाव की आवश्यकता:

(ख) वितरण अनुज्ञप्तिधारी/ट्रांसमिशन अनुज्ञप्तिधारी/राभाप्रेके द्वारा निर्धारित अक्षय ऊर्जा उत्पादन तंत्र या सुरक्षात्मक उपकरणों के संचालन के कारण वितरण अनुज्ञप्तिधारी की प्रणाली पर विद्यमान संकटमय स्थितिः

(ग) वितरण अनुज्ञप्तिधारी द्वारा यथानिर्धारित अक्षय ऊर्जा उत्पादन के कारण वितरण अनुज्ञप्तिधारी के अन्य उपभोक्ताओं के विद्युत उपकरणों पर प्रतिकूल विद्युतीय प्रभाव, जैसे कि विद्युत की गुणवता की समस्या।

10.8 अक्षय ऊर्जा उत्पादन तंत्र से उत्पादित विद्युत की गुणवता सुनिश्चित करने के लिए ईएन 50160 के अनुसार और वितरण अनुज्ञप्तिधारी के मानकों के अनुसार परीक्षण किया जाएगा।

10.9 अक्षय ऊर्जा उत्पादन तंत्र को अनेपक्षित आइलैंडिंग स्थिति का पता लगाने में सक्षम होना चाहिए। इन प्रणालियों में आपूर्ति की विफलता सहित किसी भी प्रतिकूल परिस्थितियों को रोकने के लिए एंटी-आइलैंडिंग सुरक्षा होनी चाहिए। आईसी-62116 तकनीकी मानकों के पालन ग्रिड से जुड़े इनवर्टरों के लिए आइलैंडिंग रोकथाम उपाय का परीक्षण करने के लिए किया जाएगा।

10.10 प्रत्येक अक्षय ऊर्जा उत्पादन तंत्र स्वचालित सिंक्रोनाइजेशन डिवाइस से सुसज्जित होगीः

बशर्ते कि इन्वर्टर का उपयोग करने वाली अक्षय ऊर्जा उत्पादन तंत्र के लिए अलग से सिंक्रोनाइज़िंग डिवाइस की आवश्कता नहीं होगी, यदि यह इन्वर्टर में अन्तर्निहिततः निर्मित हो।

10.11 संधारण तथा सुरक्षा प्रक्रिया को ध्यान में रखने के पश्चात्, वितरण अनुज्ञप्तिधारी अक्षय ऊर्जा उत्पादन तंत्र तथा विद्युत तन्त्र के बीच हस्त संचालित पृथक्कारी (आइसोलेटिंग) स्विच लगायेगा, जो निम्नलिखित अपेक्षाओ को पूरा करेगाः

(क) इसका दृश्यमान सत्यापन अनुज्ञात करेगा कि पृथक्करण पूरा हो गया है,

(ख) खुली तथा बन्द स्थिति स्पष्ट दर्शने के लिए संकेत युक्त होगा,

(ग) आवेदक से क्लीयरेन्स के बिना आवश्यकता के दिन में चैबीसों घण्टे अनुज्ञप्तिधारी के कार्मिको द्वारा शीघ्र तथा सुविधाजनक पंहुच के लिए समर्थ हो।

(घ) खुली स्थिति में ताला लगाये जाने योग्य हो, और

(ड.) न तो लोड ब्रेक के लिए रेटड हो और न ही अतिकरण्ट की संरक्षा की विशिष्टतायें हो।

10.12 अक्षय ऊर्जा उत्पादन तंत्र का विद्युत तन्त्र के साथ पहली बार, सिंक्रोनाइजेशन से पूर्व आवेदक तथा अनुज्ञप्तिधारी संरक्षण विशिष्टताओं तथा नियंत्रण आरेखों पर सहमत होंगे।

10.13 वितरण अनुज्ञप्तिधारी के तन्त्र में ऊर्जा के अन्तक्षेपण से पूर्व, इन्वर्टर हार्मोनिक विश्लेषण तथा अन्य विकृतियां के निष्पादन (फिल्टरिंग आउट) की विशिष्टता युक्त होगा। तकनीकी मानक, विद्युत गुणवता मानक तथा इन्वर्टर मानक इन विनियमों के अनुलग्नक-VI या समय-समय पर केविप्रा द्वारा निर्धारित किये जा सकने वाले अन्य मानको के अनुसार होंगे।

10.14 **उपभोक्ता के मीटर के पीछे जुड़े हुए अक्षय ऊर्जा उत्पादन तंत्र**

10.14.1 उपभोक्ता की मीटर के पीछे जुड़े हुए अक्षय ऊर्जा उत्पादन तंत्र, जो अनुज्ञप्तिधारी के ग्रिड के समानांतर चल रहा है, और जहां नेट बिलिंग व्यवस्था या नेट मीटरिंग व्यवस्था का चयन नहीं किया गया है, को संबंधित अनुज्ञप्तिधारी को पूर्व सूचना के बाद ही अनुमति दी जाएगीः

बशर्ते कि उपभोक्ता यह सुनिश्चित करने के लिए जिम्मेदार होगा कि केन्द्रीय विद्युत प्राधिकरण द्वारा यथानिर्दिष्ट सभी आवश्यक सुरक्षा उपाय किए गए हैः

बशर्ते यह भी कि यदि उपभोक्ता संबंधित वितरण अनुज्ञप्तिधारी को पूर्व सूचना के बिना उपभोक्ता के मीटर के पीछे अक्षय ऊर्जा उत्पादन तंत्र स्थापित करता है, तब अतिरिक्त देनदारियों को इस तरह की प्रणाली की स्थापना की अवधि के लिए निर्धारित प्रभारों की दर से लगाया जाएगा, जब तक कि यह वितरण अनुज्ञप्तिधारी के ध्यान में नही आता है कि उपभोक्ता द्वारा स्थापित ऐसी प्रणाली प्रासंगिक उपभोक्ता के वर्ग लिए वितरण अनुज्ञप्तिधारी के टैरिफ आदेश के अनुसार प्रयोज्य है।

10.14.2 उपभोक्ता के मीटर के पीछे स्थापित पात्र व्यक्तिगत अक्षय ऊर्जा उत्पादन तंत्र की अधिकतम अनुमेय क्षमता इन विनियमों में यथानिर्दिष्ट अनुबंध मांग के 100 प्रतिशत तक सीमित होगी।

10.14.3 उपभोक्ता के मीटर के पीछे स्थापित अक्षय ऊर्जा उत्पादन तंत्र से उपभोग की जा सकने वाली अधिकतम अनुमेय ऊर्जा प्रतिशत में न्यूनतम क्षमता उपयोगिता फैक्टर/प्लांट लोड फैक्टर से संबंधित ऊर्जा तक सीमित होगी जो राजस्थान विद्युत विनियामक आयोग (अक्षय ऊर्जा स्त्रोतों से टैरिफ विनिर्धारण हेतु निबन्धन एवं शर्तें) विनियम, 2020 में यथानिर्दिष्ट संबंधित प्रौद्योगिकी के लिए लागू है से 5 प्रतिशत अधिक (प्लस) ।

10.14.4 उपभोक्ता यह सुनिश्चित करेगा कि उपभोक्ता के मीटर के पीछे स्थापित अक्षय ऊर्जा उत्पादन तंत्र से ग्रिड में कोई ऊर्जा अन्तःक्षेपित नहीं होः

बशर्ते कि उपभोक्ता के मीटर के पीछे से जुड़े ऐसे अक्षय ऊर्जा उत्पादन तंत्र द्वारा अन्तःक्षेपित ऊर्जा की किसी भी मात्रा को अनजाने अन्तःक्षेप के रूप में माना जाएगा और वितरण अनुज्ञप्तिधारी द्वारा न तो भुगतान किया जाएगा और न ही इसका निपटारा किया जाएगाः

बशर्ते यह कि उपभोक्ता के मीटर के पीछे से जुड़े ऐसे अक्षय ऊर्जा उत्पादन तंत्र द्वारा अन्तःक्षेपित ऊर्जा की किसी भी मात्रा को अनजाने अन्तःक्षेप के रूप में माना जाएगा और प्रवर्तमान प्रयोज्य प्रासंगिक विनियमों के अनुसार ऐसे अनजाने अन्तःक्षेप पर शास्ति उदग्रहित की जायेगी।

10.14.5 समानांतर संचालन प्रभार के अलावा, यदि वितरण अनुज्ञप्तिधारी इस तरह की प्रणाली के लिए उसकी खुदरा आपूर्ति टैरिफ याचिका में पर्याप्त औचित्य द्वारा समर्थित ऐसे अतिरिक्त स्थायी प्रभार या मांग प्रभार और कोई अन्य प्रभार का प्रस्ताव करता है तो आयोग खुदरा टैरिफ आदेश में, उपभोक्ता के मीटर के पीछे स्थापित ऐसी प्रणाली के लिए निर्धारित प्रभार या मांग प्रभार और किसी अन्य प्रभार के रूप में अतिरिक्त समानांतर संचालन प्रभार भी निर्धारित कर सकता है।

10.14.6 उपभोक्ता, जिन्होंने उपभोक्ता के मीटर के पीछे सोलर रूफटॉप पीवी सिस्टम को जोड़ा है और राजस्थान विद्युत विनियामक आयोग (रूफटॉप और लघु सौर ग्रिड पारस्परिक क्रिया तन्त्र हेतु संयोजिता और नेट मीटरिंग) विनियम, 2015 और उसके पश्चातवर्ती संशोधनों के अन्तर्गत नेट मीटरिंग व्यवस्था का विकल्प नहीं चुना, इन विनियमों की अधिसूचना से तीन (3) महीनों के भीतर मॉडल फॉर्म में वितरण अनुज्ञप्तिधारी को इस तरह के विवरण को सूचित करेंगेः

बशर्ते कि यदि उपभोक्ता निर्दिष्ट समय के भीतर वितरण अनुज्ञप्तिधारी को उपभोक्ता के मीटर के पीछे सौर रूफटॉप पीवी तंत्र के विवरण को सूचित करने में विफल रहता है, तो अतिरिक्त दायित्वों को विलंब की ऐसी अवधि के लिये संबंधित उपभोक्ता श्रेणी के लिए वितरण अनुज्ञप्तिधारियों के टैरिफ आदेश के अनुसार लागू स्थायी प्रभारों की दर पर उदग्रहित किया जायेगाः

बशर्ते यह भी कि अतिरिक्त दायित्वों को संबंधित उपभोक्ता श्रेणी के लिए वितरण अनुज्ञप्तिधारियों के टैरिफ आदेश के अनुसार मासिक आधार पर इन विनियमों की अधिसूचना से तीन (3) महीने बाद उदग्रहित किया जायेगा।

10.14.7 वितरण अनुज्ञप्तिधारी, जैसे ही और जब अपेक्षित हो, अधिनियम और उनके अधीन बनाये गये विनियमों के प्रावधानों के अनुसार, उपभोक्ता के मीटर के पीछे अक्षय ऊर्जा उत्पादन तंत्र की स्थापना का निरीक्षण और सत्यापन कर सकता है।

10.14.8 संबंधित अनुज्ञप्तिधारी को पात्र उपभोक्ता द्वारा मीटर के पीछे अक्षय ऊर्जा उत्पादन तंत्र की स्थापना की सूचना के लिये मॉडल फॉर्म, इन विनियमों के अनुलग्नक- V में निर्धारित किया गया है।

11 **मीटरिंग व्यवस्था**

11.1 अक्षय ऊर्जा उत्पादन तंत्र में स्थापित सभी मीटर केन्द्रीय विद्युत प्राधिकरण (मीटर का अधिष्ठापन एवं प्रचालन) विनियम, 2006 और उसके पश्चातवर्ती संशोधनों का अनुपालन करेंगे।

11.2 सभी मीटरों में RS 485 (या उच्चतर) संचार पोर्ट या किसी अन्य अग्रिम संचार सुविधा के साथ उन्नत मीटरिंग इंफ्रास्ट्रक्चर (AMI) सुविधा होगी।

11.3 नेट बिलिंग व्यवस्था के अन्तर्गत, अक्षय ऊर्जा उत्पादन तंत्र उपभोक्ता मीटर के वितरण अनुज्ञप्तिधारी पक्ष पर जुड़ी होगी।

11.4 नेट मीटरिंग व्यवस्था में वितरण अनुज्ञप्तिधारी द्वारा यथा अभिनिश्चित अंतर-कनेक्शन के बिंदु पर स्थित एकल-चरण या तीन-चरण नेट मीटर, जो अपेक्षित हो, शामिल होंगेः

बशर्ते कि नेट मीटरिंग व्यवस्था के अन्तर्गत अक्षय ऊर्जा उत्पादन तंत्र उपभोक्ता मीटर के उपभोक्ता पक्ष पर जुड़ा होगा।

11.5 पात्र उपभोक्ता, अपनी लागत पर, ऐसी प्रणाली से उत्पादित ऊर्जा को मापने के लिए अक्षय ऊर्जा उत्पादन तंत्र के इंटरकनेक्शन प्वाइंट पर लागू केन्द्रीय विद्युत प्राधिकरण के विनियमों के अनुरूप अक्षय ऊर्जा जनरेशन मीटर स्थापित करेगा।

11.6 वितरण अनुज्ञप्तिधारी मीटरिंग उपकरणों के परीक्षण, स्थापना और रखरखाव और लागू मानकों और विनिर्देशों के पालन के लिए जिम्मेदार होगाः

बशर्ते कि उपभोक्ता मीटरिंग उपकरणों के परीक्षण, स्थापना और रखरखाव से सम्बन्धित लागत वहन करेगा।

11.7 मीटर को इस प्रकार से स्थापित किया जाएगा जिससे कि मीटर रीडिंग के लिए वितरण अनुज्ञप्तिधारी की आसान पहुँच हो।

11.8 स्थापित मीटरों का संयुक्त रूप से निरीक्षण किया जाएगा और दोनों पक्षों की ओर से सील किया जाएगा और केवल उपभोक्ता और वितरण अनुज्ञप्तिधारी के प्रतिनिधियों की उपस्थिति में या आयोग द्वारा निर्दिष्ट आपूर्ति कोड के अनुसार परीक्षण या जाँच की जाएगीः

बशर्ते कि पात्र उपभोक्ता मीटर लगाने के लिए वितरण अनुज्ञप्तिधारी द्वारा समय-समय पर यथा विकसित और आपूर्ति कोड के अनुसार मीटरिंग विनिर्देशों और प्रावधानों का पालन करेगा।

11.9 वितरण अनुज्ञप्तिधारी द्वारा ली गयी मीटर रीडिंग, बिलिंग और वाणिज्यिक निपटान का आधार बनेगी।

11.10 उपभोक्ता, अपनी लागत पर, अक्षय ऊर्जा जनरेशन मीटर के लिए उपयुक्त वर्ग का एक चैक मीटर भी स्थापित करेगाः

बशर्ते कि दोषपूर्ण/विफलता/जली हुई स्थिति के कारण अक्षय ऊर्जा जनरेशन मीटर से रीडिंग की अनुपस्थिति में, ऐसे चैक मीटर का उपयोग बिलिंग और वाणिज्यिक निपटान के लिए किया जाएगा।

11.11 किसी भी मीटर की दोषपूर्ण/विफलता/जलने की स्थिति में, उपभोक्ता वितरण अनुज्ञप्तिधारी को वितरण अनुज्ञप्तिधारी के निर्दिष्ट प्रारूप में विफलता की रिपोर्ट करेगाः

बशर्ते कि वितरण अनुज्ञप्तिधारी समय-समय पर यथा संशोधित विद्युत प्रदाय कोड में यथानिर्दिष्ट तरीके से मीटर को प्रतिस्थापित करेगा।

Annexure-IV

12 ऊर्जा लेखांकन और व्यवस्थापन

12.1 पात्र उपभोक्ता द्वारा निर्यात और आयात की गई विद्युत का लेखांकन वितरण नेटवर्क के साथ अक्षय ऊर्जा उत्पादन तंत्र की कनेक्टिविटी की तारीख से प्रभावी हो जाएगा।

12.2 नियमित मीटरिंग चक्र के अनुसार, वितरण अनुज्ञप्तिधारी सभी पात्र उपभोक्ताओं के लिए, अक्षय ऊर्जा जनरेशन मीटर और उपभोक्ता मीटर या नेट मीटर, यथा लागू, दोनों की मीटर रीडिंग करेगा।

12.3 मीटर रीडिंग मासिक या लागू विद्युत प्रदाय कोड के अन्तर्गत निर्दिष्ट बिलिंग चक्र के अनुसार ली जाएगीः

बशर्ते कि मीटर की दोषपूर्ण/विफलता/जलने की स्थिति में, जिस अवधि में मीटर खराब होता है, उस अवधि के दौरान अक्षय ऊर्जा उत्पादन तंत्र द्वारा उत्पादित विद्युत, चैक मीटर से ली जाएगीः

बशर्ते यह भी कि अगर मीटर की रीडिंग चैक मीटर से उपलब्ध नहीं है, तो जिस अवधि के दौरान अक्षय ऊर्जा जनरेशन मीटर और चैक मीटर खराब होते हैं, उस समय अक्षय ऊर्जा उत्पादन तंत्र द्वारा उत्पादित विद्युत, विद्युत प्रदाय कोड में निर्दिष्ट प्रावधानों के अनुसार होगी।

12.4 प्रत्येक बिलिंग अवधि के लिए, अनुज्ञप्तिधारी पात्र उपभोक्ता को अपने बिल में निम्नलिखित जानकारी अलग से दर्शायेगाः

क) प्रारम्भिक और अंतिम शेष को शामिल करते हुए अक्षय ऊर्जा जनरेशन मीटर में दर्ज ऊर्जा उत्पादन की मात्राः
ख) प्रारम्भिक और अंतिम शेष को शामिल करते हुए बिलिंग अवधि में उपभोक्ता द्वारा उपभोग की गई विद्युत यूनिटों की मात्राः
ग) प्रारम्भिक और अंतिम शेष को शामिल करते हुए बिलिंग अवधि में बिलिंग क्रेडिट की राशि, यदि कोई होः
घ) आरपीओ अनुपालना के लिए वितरण अनुज्ञप्तिधारी द्वारा उपयोग की जाने वाली जनरेशन यूनिटे।

12.5 **नेट बिलिंग व्यवस्था**

12.5.1 नेट बिलिंग एक ऐसी व्यवस्था है, जहां अक्षय ऊर्जा उत्पादन तंत्रः

(क) किसी विशिष्ट उपभोक्ता को सेवा देने के लिए स्थापित हैः

(ख) उपभोक्ता के मीटर के वितरण अनुज्ञप्तिधारी पक्ष पर जुडी हैः

(ग) वितरण अनुज्ञप्तिधारी के साथ कनेक्शन अनुबंध में सहमत टैरिफ पर कनेक्शन अनुबंध के अन्तर्गत वितरण अनुज्ञप्तिधारी को उत्पादित पूरी विद्युत विक्रय, और वितरण अनुज्ञप्तिधारी द्वारा आपूर्ति की गई विद्युत के लिए उपभोक्ता द्वारा देय राशि को वितरण अनुज्ञप्तिधारी द्वारा देय राशि से घटाकर हो।

12.5.2 वितरण अनुज्ञप्तिधारी पिछले वितीय वर्ष में संबंधित प्रौद्योगिकी के लिए प्रतिस्पर्धा बोली के माध्यम से ज्ञात किये गए और आयोग द्वारा अंगीकृत भारित औसत टैरिफ से 25 प्रतिशत अधिक के प्रोत्साहन पर कनेक्शन समझौता करेगा। यदि पिछले वितीय वर्ष में कोई बोली प्रक्रिया नहीं की गयी है, तो प्रतिस्पर्धी बोली के माध्यम से ज्ञात किये गए नवीनतम टैरिफ से 25 प्रतिशत अधिक का प्रोत्साहन लागू होगाः

बशर्ते कि यदि संबंधित प्रौद्योगिकी के लिए कोई बोली प्रक्रिया नहीं की गयी है, तो प्रतिस्पर्धी बोली के माध्यम से ज्ञात किये गए और आयोग द्वारा अंगीकृत 5 मेगावाट और अधिक की बड़े पैमाने पर सौर परियोजनाओं के नवीनतम भारित औसत टैरिफ से 25 प्रतिशत अधिक का प्रोत्साहन लागू होगाः

बशर्ते यह भी कि उपरोक्त टैरिफ समझौते की पूरी अवधि के लिए लागू होगा।

12.5.3 वितरण अनुज्ञप्तिधारी निम्नलिखित समीकरण के अनुसार उपभोक्ता का बिल तैयार करेगाः
उपभोक्ता का ऊर्जा बिल = स्थायी प्रभार + अन्य लागू प्रभार और कर + (EDLxTRST) –(ERE * TPPA)– बिलिंग क्रेडिटः

जहां:

(क) स्थायी प्रभार का अर्थ खुदरा आपूर्ति टैरिफ आदेश के अनुसार उपभोक्ता की श्रेणी के लिए यथाप्रयोज्य स्थिर/मांग प्रभार हैः

(ख) अन्य प्रभारों और कर का अर्थ है कोई भी अन्य प्रभार जैसे कि शुल्क और कर, उपकर आदिः

(ग) ईडीएल का अर्थ है बिलिंग अवधि के लिए उपभोक्ता मीटर द्वारा यथा रिकार्ड की गयी वितरण अनुज्ञप्तिधारी द्वारा आपूर्ति की गई ऊर्जा यूनिटें (अर्थात, उपभोक्ता द्वारा सकल विद्युत उपभोग:

(घ) टीआरएसटी का अर्थ है आयोग के लागू खुदरा आपूर्ति टैरिफ आदेश के अनुसार संबंधित उपभोक्ता श्रेणी का लागू खुदरा आपूर्ति टैरिफः

(ड) ईआरई का अर्थ है अक्षय ऊर्जा जनरेशन मीटर द्वारा बिलिंग अवधि के लिए रिकार्ड की गयी ऊर्जा यूनिटें:

(च) टीपीपीए का अर्थ है कि विनियम 12.5.2 के अनुसार उपभोक्ता और वितरण अनुज्ञप्तिधारी के मध्य हस्ताक्षरित अनुबंध के अनुसार टैरिफः

(छ) बिलिंग क्रेडिट, यदि कोई हो, एक महीने के लिए संचयी प्रारंभिक क्रेडिट है।

12.5.4 यदि उपभोक्ता बिल के अन्य सभी घटकों के मूल्य से एक महीने में अक्षय ऊर्जा उत्पादन का मूल्य अधिक है, तो ऐसे माह के लिए विद्युत बिल में वितरण अनुज्ञप्तिधारी द्वारा बिलिंग क्रेडिट प्रदान किया जाएगाः

बशर्ते कि इस तरह के बिलिंग क्रेडिट को अगले महीने को अग्रनीत किया जाएगा और विनियम 12.5.3 में निर्दिष्टानुसार समायोजित किया जाएगाः

बशर्ते यह भी कि निपटान अवधि के अंत में बिलिंग क्रेडिट का भुगतान अगले वितीय वर्ष की पंद्रह मई तक वितरण अनुज्ञप्तिधारी द्वारा पात्र उपभोक्ता को किया जाएगा।

12.5.5 जब एक पात्र उपभोक्ता सिस्टम को छोड़ता है, तो उपलब्ध बिलिंग क्रेडिट व्यपगत हो जाएगा, और कोई भुगतान नहीं किया जाएगा।

12.5.6 अधिकतम अनुमेय ऊर्जा जो कि नेट बिलिंग व्यवस्था के अन्तर्गत स्थापित अक्षय ऊर्जा उत्पादन तंत्र से उत्पादित की जा सकती है वह राजस्थान विद्युत विनियामक आयोग (अक्षय ऊर्जा स्त्रोतों से टैरिफ विनिर्धारण हेतु निबन्धन एवं शर्तें) विनियम, 2020 में यथानिर्दिष्ट संबंधित प्रौद्योगिकी के लिए प्रतिशत में लागू न्यूनतम क्षमता उपयोग फैक्टर/प्लांट लोड फैक्टर साथ ही 5 प्रतिशत के अनुरूप ऊर्जा तक सीमित होगी।

12.5.7 विशिष्ट केंद्रीय और/या राज्य सरकार की योजनाओं जैसे कि पीएम कुसुम, के अंतर्गत आने वाले उपभोक्ताओं के लिए, वितरण लाइसेंसधारियों द्वारा ऊर्जा की मात्रा और खरीद की दर इस संबंध में आयोग द्वारा जारी आदेश के अनुसार होगी।

12.6 **नेट मीटरिंग व्यवस्था**

12.6.1 नेट मीटरिंग व्यवस्था के अन्तर्गत ऊर्जा लेखांकन और व्यवस्थापन निम्नानुसार होगाः

क) यदि घरेलू श्रेणी के उपभोक्ता द्वारा निर्यात की जाने वाली विद्युत की मात्रा बिलिंग अवधि के दौरान आयात की गई मात्रा से अधिक है, तो ऐसे घरेलू उपभोक्ता द्वारा निर्यात की जाने वाली अतिरिक्त मात्रा को अनुज्ञप्तिधारी द्वारा 5 मेगावाट और उससे अधिक की बृहद सौर परियोजनाओं के भारित औसत टैरिफ, जिसे पिछले वितीय वर्ष में प्रतिस्पर्धी बोली के माध्यम से ज्ञात किया गया था, और आयोग द्वारा अंगीकृत किया गया था, पर क्रय किया जाएगा। यदि पिछले वितीय वर्ष में कोई बोली प्रक्रिया नहीं की गई है, तो प्रतिस्पर्धी बोली के माध्यम से ज्ञात नवीनतम टैरिफ लागू होगा। ऐसे उपभोक्ता द्वारा अंतःक्षेप की गई अतिरिक्त ऊर्जा के लिए प्राप्त कुल राशि को क्रेडिट के रूप में समायोजित किया जाएगा, जो तुरंत उतरवर्ती बिलिंग चक्र में देय ऐसी राशि के बराबर होगीः

बशर्ते कि राजस्थान विद्युत विनियामक आयोग (रूफटॉप और लघु सौर ग्रिड पारस्परिक क्रिया तन्त्र हेतु संयोजिता और नेट मीटरिंग) विनियम, 2015 और उसके पश्चातवर्ती संशोधनों के अनुसार शासित विद्यमान नेट मीटरिंग संस्थापन वाले घरेलू उपभोक्ताओं के मामले में भी, निर्यात की गयी अतिरिक्त मात्रा को वितरण अनुज्ञप्तिधारी द्वारा 5 मेगावाट और उससे अधिक की बृहद सौर परियोजनाओं के भारित औसत टैरिफ, जिसे पिछले वितीय वर्ष में प्रतिस्पर्धी बोली के माध्यम से ज्ञात किया गया था, और आयोग द्वारा अंगीकृत किया गया था, पर क्रय किया जाएगा। यदि पिछले वितीय वर्ष में कोई बोली प्रक्रिया नहीं की गई है, तो प्रतिस्पर्धी बोली के माध्यम से ज्ञात नवीनतम टैरिफ लागू होगा। ऐसे उपभोक्ता द्वारा अंतःक्षेप की गई अतिरिक्त ऊर्जा के लिए प्राप्त कुल राशि को क्रेडिट के रूप में समायोजित किया जाएगा, जो तुरंत उतरवर्ती बिलिंग चक्र में देय ऐसी राशि के बराबर होगीः

बशर्ते यह भी कि घरेलू श्रेणी के अलावा अन्य उपभोक्ताओं के मामले में, राजस्थान विद्युत विनियामक आयोग (रूफटॉप और लघु सौर ग्रिड पारस्परिक क्रिया तन्त्र हेतु संयोजिता और नेट मीटरिंग) विनियम, 2015 और उसके पश्चातवर्ती संशोधनों

के अनुसार शासित विद्यमान नेट मीटरिंग अधिष्ठापन के अन्तर्गत आवृत उपभोक्ताओं के लिये भी ऊर्जा बिलिंग भी उपरोक्त परन्तुक द्वारा शासित होगी।

बशर्ते यह भी कि केन्द्र और/या राज्य सरकार की विशिष्ट योजनाओं जैसे पीएम कुसुम के अन्तर्गत आने वाले उपभोक्ताओं के लिये वितरण अनुज्ञप्तिधारियों द्वारा ऊर्जा की खरीद की मात्रा तथा दर इस संबंध में आयोग द्वारा जारी आदेश के अनुसार होगी।

ख) यदि किसी भी बिलिंग अवधि के दौरान पात्र उपभोक्ता द्वारा आयातित विद्युत इकाइयों की मात्रा निर्यात की गयी मात्रा से अधिक है, तो वितरण अनुज्ञप्तिधारी क्रेडिट इकाइयों को समायोजित करने के बाद शुद्ध बिजली की खपत के लिये अपना बिल जारी करेगा।

ग) घरेलू श्रेणी के उपभोक्ता के लिए प्रत्येक वितीय वर्ष के अंत में विद्युत की असमायोजित नेट क्रेडिट यूनिटों को वितरण अनुज्ञप्तिधारी द्वारा उसी दर पर खरीदा जाएगा जो 12.6.1 (क) में उल्लिखित है और अगले वर्ष के पहले महीने के भीतर उपभोक्ता के खाते में क्रेडिट की जायेगी।

घ) अधिकतम अनुमेय ऊर्जा जो कि नेट बिलिंग व्यवस्था के अन्तर्गत स्थापित अक्षय ऊर्जा उत्पादन तंत्र से उपभोग की जा सकती है वह राजस्थान विद्युत विनियामक आयोग (अक्षय ऊर्जा स्त्रोतों से टैरिफ विनिर्धारण हेतु निबन्धन एवं शर्तें) विनियम, 2020 में यथानिर्दिष्ट संबंधित प्रौद्योगिकी के लिए प्रतिशत में लागू न्यूनतम क्षमता उपयोग फैक्टर/प्लांट लोड फैक्टर से 5 प्रतिशत अधिक के अनुरूप ऊर्जा तक सीमित होगी।

12.7 बिलिंग में किसी भी विवाद के मामले में, यह उपभोक्ता शिकायत निवारण फोरम द्वारा निपटाया जाएगा और यदि समस्या अभी भी अनसुलझी है, तो उपभोक्ता मामले को लोकपाल के समक्ष प्रस्तुत कर सकता है।

13 रिपोर्टिंग की आवश्यकतायें

13.1 वितरण अनुज्ञप्तिधारी प्रत्येक वर्ष की पहली मई तक निम्नलिखित की रिपोर्ट करेगा, और अपनी वेबसाइट पर भी प्रदर्शित करेगाः

(क) पिछले वितीय वर्ष के अंत में अक्षय ऊर्जा उत्पादन तंत्र से अन्तर्सम्बन्ध वाले पात्र उपभोक्ताओं की कुल संख्याः

(ख) पिछले वितीय वर्ष के अंत में अन्तर्सम्बन्ध पात्र उपभोक्ताओं की कुल किलोवाट क्षमताः

(ग) पिछले वितीय वर्ष के लिए माह और वर्ष के अनुसार वितरण अनुज्ञप्तिधारी से पात्र उपभोक्ता द्वारा प्राप्त कुल किवाघं:

(घ) पिछले वितीय वर्ष के लिए माह और वर्ष के अनुसार पात्र उपभोक्ता द्वारा उत्पादित अक्षय ऊर्जा का कुल किवाघं:

(ड) पिछले वितीय वर्ष के लिए पात्र उपभोक्ता द्वारा एलटी चक्र के अनुसार और वर्ष में वितरण अनुज्ञप्तिधारी को परिदत कुल किवाघं:

(च) प्रत्येक पात्र उपभोक्ता अंर्तसंबध अर्न्तसंबध के लिएः

1) उपयोग की गयी अक्षय ऊर्जा प्रौद्योगिकीः
2) सकल विद्युत रेटिंगः
3) भौगोलिक अवस्थितिः तथा
4) अन्तर्सम्बन्ध दिनांक।

14 **अक्षय क्रय बाध्यता**

14.1 पात्र उपभोक्ता द्वारा नेट बिलिंग व्यवस्था या नेट मीटरिंग व्यवस्था के अन्तर्गत अक्षय ऊर्जा उत्पादन तंत्र से उत्पादित विद्युत की मात्रा, वितरण अनुज्ञप्तिधारी जिसके आपूर्ति के क्षेत्र में पात्र उपभोक्ता अवस्थित है, के लिए अक्षय क्रय बाध्यता (आरपीओ) के अनुपालन के विषय में विशेषित होगी।

बशर्ते कि उत्पादित विद्युत की ऐसी मात्रा नेट मीटरिंग व्यवस्था के अन्तर्गत अक्षय क्रय बाध्यता के अनुपालना के विषय में विशेषित होगी, यदि पात्र उपभोक्ता को वचनबद्ध इकाई के रूप में परिभाषित नहीं किया गया है।

15 **अन्य प्रभारों की प्रयोज्यता**

15.1 नेट मीटरिंग व्यवस्था के अन्तर्गत स्व-स्वामित्व वाले अक्षय ऊर्जा उत्पादन तंत्र, यदि पात्र उपभोक्ता के परिसर में अधिष्ठापित की गयी है, से उत्पादित विद्युत की मात्रा को बैंकिंग प्रभारों, व्हीलिंग प्रभारों, क्रॉस सब्सिडी अधिभार और अतिरिक्त अधिभार से छूट दी जाएगी।

15.2 नेट मीटरिंग व्यवस्था के अन्तर्गत रेस्को के स्वामित्व वाले अक्षय ऊर्जा उत्पादन तंत्र से उत्पादित विद्युत की मात्रा, यदि पात्र उपभोक्ता के परिसर में स्थापित की गई है, को बैंकिंग प्रभारों और व्हीलिंग प्रभारों से मुक्त किया जाएगाः

बशर्ते कि एलटी घरेलू श्रेणी के उपभोक्ताओं को छोड़कर, नेट मीटरिंग व्यवस्था के अन्तर्गत इस तरह के रेस्को के स्वामित्व वाले अक्षय ऊर्जा उत्पादन तंत्र के लिए क्रॉस सब्सिडी अधिभार और अतिरिक्त अधिभार, खुला अभिगम उपभोक्ताओं के लिए लागू क्रॉस सब्सिडी अधिभार और अतिरिक्त अधिभार के 50 प्रतिशत की दर से लागू होगा।

बशर्ते यह भी कि उन उपभोक्ता श्रेणियों के मामले में, जिनके लिए सब्सिडी अधिभार और अतिरिक्त अधिभार का निर्धारण आयोग द्वारा नहीं किया गया है, अधिभार (क्रॉस सब्सिडी तथा अतिरिक्त अधिभार का योग), उपभोक्ताओं की ऐसी श्रेणी के लिए 1.25 रूपये प्रति किलोवाटघंटा की दर से लागू होगा, जब तक आयोग द्वारा एक पृथक आदेश के माध्यम से इसे संशोधित नहीं किया जाता है।

15.3 नेट बिलिंग व्यवस्था के अन्तर्गत स्व-स्वामित्व और रेस्को के स्वामित्व वाले अक्षय ऊर्जा उत्पादन तंत्र यदि पात्र उपभोक्ता के परिसर में अधिष्ठापित किये गये है, से उत्पादित विद्युत की मात्रा के लिये बैंकिंग प्रभारों, व्हीलिंग प्रभारों, क्रॉस सब्सिडी अधिभार और अतिरिक्त अधिभार से छूट दी जाएगी।

16 **सीडीएम के लाभो का सहभाजन**

16.1 अक्षय ऊर्जा उत्पादन तंत्र से सौर ऊर्जा उत्पादन से होने वाले सीडीएम लाभ वितरण अनुज्ञप्तिधारी द्वारा प्रतिधारित किये जायेगेः

बशर्ते कि वितरण अनुज्ञप्तिधारी द्वारा प्राप्त पूरे सीडीएम लाभ एआरआर के माध्यम से पूरी तरह से उपभोक्ताओं को पारित किये जायेगे।

17 **समानांतर संचालन प्रभार**

17.1 आयोग नेट मीटरिंग सिस्टम के अन्तर्गत उत्पादित ऊर्जा पर लगाए जाने वाले 'समानांतर संचालन प्रभार' को समय-समय पर निर्धारित कर सकता है, जिसमें आरपीओ के लाभों को समायोजित करने के पश्चात संतुलन, बैंकिंग और व्हीलिंग लागत, वितरण अनुज्ञप्तिधारी द्वारा दायर याचिका के आधार पर पर्याप्त औचित्य द्वारा समर्थित वितरण अनुज्ञप्तिधारी को होने वाले वितरण घाटे से बचने और उसको मिलने वाले अन्य लाभों को विचारित किया जाएगा।

बशर्ते कि नेट बिलिंग उपभोक्ताओं पर कोई समानांतर संचालन प्रभार नहीं लगाया जाएगाः

बशर्ते यह भी कि उपभोक्ता के मीटर के पीछे सम्बद्ध अक्षय ऊर्जा उत्पादन तंत्र पर विनियम 10.14.5 के अनुसार प्रभार के अलावा समानांतर संचालन प्रभार भी लागू होगा।

18. **शास्ति**

18.1 इन विनियमों की अपेक्षाओं को पूरा करने में विफल रहने की दशा में अक्षय ऊर्जा उत्पादन तंत्र या वितरण अनुज्ञप्तिधारी, यथास्थिति, आयोग द्वारा समय-समय पर यथा निर्धारित, शास्ति के भुगतान के लिये उतरदायी होगा।

19. **निर्देश देने की शक्तियां**

19.1 आयोग, इन विनियमों के उचित कार्यान्वयन हेतु, समय-समय पर विचारित उपयुक्त निर्देश तथा आदेश जारी कर सकता है।

20. संशोधन की शक्तियां

20.1 आयोग किसी भी समय इन विनियमों के प्रावधानों को परिवर्तित, रूपान्तरित या संशोधित कर सकता है।

21. **शिथिलता की शक्तियां**

21.1 आयोग कारणों को लिखित में अंकित करते हुये, तथा प्रभावित होने वाले पक्षकारों को सुनवाई का अवसर देने के पश्चात् स्वप्रेरणा से या किसी इच्छुक व्यक्ति द्वारा इसके समक्ष आवेदन किये जाने पर, इन विनियामें के प्रावधानों में शिथिलता दे सकता है।

22. **कठिनाइयों को दूर करने की शक्ति**

22.1 यदि इन विनियमों के प्रावधानों को प्रभावी करने में कठिनाई उत्पन्न होती है, तो आयोग स्वप्रेरणा से या याचिका किये जाने पर, सामान्य या विशिष्ट आदेश से, कठिनाई को दूर करने के लिये आवश्यक प्रतीत होने वाले अधिनियम के प्रावधानों से असंगत न होने वाले प्रावधान बना सकता है।

आयोग की आज्ञा से,

(सचिव)

Annexure-IV

अनुलग्नक I

संक्षेपणों की सूची

बीआईएस	भारतीय मानक ब्यूरो
सीईए	केन्द्रीय विद्युत प्राधिकरण
सीटी	करण्ट ट्रांसफार्मर
डीसी	डाइरेक्ट करण्ट
डिस्कॉम	जयपुर विद्युत वितरण निगम लिमिटेड, अजमेर विद्युत वितरण निगम लिमिटेड, जोधपुर विद्युत वितरण निगम लिमिटेड
ईएचटी	अतिरिक्त उच्च आतति
एचटी	उच्च आतति
आईईसी	अन्तर्राष्ट्रीय विद्युत तकनीकी आयोग
आईईईई	विद्युतीय तथा इलेक्ट्रानिक्स अभियन्ता संस्थान
केवी	किलो वोल्ट
केवीए	किलो वोल्ट एम्पीयर
किवा	किलोवाट
केडब्ल्यूएच	किलोवाट घण्टा
एलटी	निम्न आतति
पीसीयू	विद्युत अनुकूलन इकाई
आरई	अक्षय ऊर्जा
आरईसी	अक्षय ऊर्जा प्रमाण-पत्र
आरईआरसी (राविविआ या आयोग)	राजस्थान विद्युत विनियामक आयोग
आरपीओ	अक्षय क्रय बाध्यता

Annexure-IV

एसएलडीसी	राज्य भार प्रेषण केन्द्र
एसएम	सौर मीटर
एसपीवी	सौर फोटो वोल्टेक

अनुलग्नक -II

नेट बिलिंग व्यवस्था या नेट मीटरिंग व्यवस्था के अन्तर्गत अक्षय ऊर्जा उत्पादन तंत्र की कनेक्टिविटी के आवेदन के लिये मॉडल प्रारूप

वितरण अनुज्ञप्तिधारी का नाम .....

प्रशासनिक कार्यालय का नाम .....

आवेदन संख्या .....

प्राप्ति दिनांक .....

1	आवेदक का नाम	
2	आवेदक का पता	
3	सर्विस कनेक्शन संख्या	
4	सर्विस कनेक्शन टैरिफ	
5	दूरभाष नम्बर	
6	ईमेल आई डी	
7	अक्षय ऊर्जा उत्पादन तंत्र क्षमता (किलोवाट)	
8	अक्षय ऊर्जा उत्पादन तंत्र ग्रिड इन्वर्टर का मेक और प्रकार	
9	अक्षय ऊर्जा उत्पादन तंत्र ग्रिड इन्वर्टर में स्वतः पृथक्करण सुरक्षा उपलब्ध है (हाँ/नहीं) ?	
10	क्या अक्षय ऊर्जा उत्पादन तंत्र मीटर अधिष्ठापित है	

Annexure-IV

	(हाँ/नहीं) ?	
11	अक्षय ऊर्जा तंत्र के प्रारम्भ होने की प्रत्याशित दिनांक	
12	विनियमों के अधीन अपेक्षित मानकों के लिये अक्षय ऊर्जा तंत्र/इन्वर्टर के परीक्षण प्रमाण-पत्रों का ब्यौरा	

आवेदक के हस्ताक्षरः

दिनांकः

आवेदन पत्र के साथ संलग्न दस्तावेजों की सूची (अपलोड किये जावें -कोई भौतिक प्रतियां नही)

1. नवीनतम प्रदत विद्युत बिल की प्रति।

2. साझेदारी फर्मों के मामलें में हस्ताक्षरकर्ता के पक्ष में सामान्य मुख्तारनामा; कम्पनियों के मामलें में संबंधित वितरण अनुज्ञप्तिधारी के व्यवहार करने हेतु हस्ताक्षकरर्ता को प्राधिकृत करते हुये निदेशक मण्डल द्वारा पारित रिजाल्यूशन की प्रमाणित सही प्रति (जैसा लागू हो)।

3. अक्षय ऊर्जा उत्पादन तंत्र, इन्वर्टर और तंत्र के अन्य उपकरण जिन्हें स्थापित किये जाना प्रस्तावित किया गया है, के तकनीकी विवरण।

4. पंजीकरण शुल्क के भुगतान का प्रमाण।

पावती (वेब सक्षम प्रणाली द्वारा जनित रसीद)

नीचे दिये गये विवरण के अनुसार ..... किवा को क्षमता का अक्षय ऊर्जा नेट बिलिंग या नेट मीटरिंग कनेक्शन /अक्षय ऊर्जा उत्पादन तंत्र की स्थापना के लिये ..... से आवेदन प्राप्त हुआः

नामः

दिनांकः

सर्विस कनेक्शन सं.:

आवेदन पंजीकरण सं.:

अक्षय ऊर्जा उत्पादन तंत्र की क्षमताः

Annexure-IV

अधिकारी का नामः

हस्ताक्षरः

पदनाम/(डिस्कॉम का नाम)

अनुलग्नक - III

अनुसूची

(विनियम 8.3 के अनुसरण में)

क्र.सं.	विवरण	राशि
1	आवेदन शुल्क	
	i. निम्न आतति एकल फेज	200 रूपये
	ii. निम्न आतति तीन फेज	500 रूपये
	iii. उच्च आतति -11 केवी	1000 रूपये
	iv. उच्च आतति -33 केवी	2000 रूपये
	v. अतिरिक्त उच्च आतति - 132 केवी तथा उच्चतर	5000 रूपये
2	अक्षय ऊर्जा संयंत्र हेतु प्रतिभूति निक्षेप	
	(क) घरेलू	100 रूपये प्रति किलोवाट
	(ख) अघरेलू तथा अन्य	200 रूपये प्रति किलोवाट

रेस्को (आरईएससीओ) स्वामित्व वाले तंत्र के लिये प्रतिभूति की राशि ऊपर वर्णित राशि से दोगुनी होगी।

प्रतिभूति निक्षेप पर कोई ब्याज देय नहीं होगा।

Annexure-IV

अनुलग्नक – IV-अ

<u>नेट बिलिंग कनेक्शन अनुबन्ध का मॉडल</u>

यह अनुबन्ध ..... (अवस्थिति) में ..... (पता) पर परिसर के धारी पात्र उपभोक्ता ..... (प्रथम पक्षकार)

तथा

वितरण अनुज्ञप्तिधारी (आगे चलकर डिस्कॉम के रूप में कहा जायेगा) के प्रतिनिधि (अनुबन्ध के द्वितीय पक्षकार)..... (कार्यालय का पदनाम) एवं जिसका पंजीकृत कार्यालय..... (पता) पर स्थित है, के बीच वर्ष ..... के माह..... के इस दिवस ..... को किया जाता है।

तथा, यह कि डिस्कॉम, पात्र उपभोक्ता को ..... किवा की क्षमता अक्षय ऊर्जा उत्पादन तंत्र से उत्पादित विद्युत को डिस्कॉम के विद्युत तंत्र में अन्तःक्षेपण हेतु ग्रिड संयोजिता उपलब्ध करवाने के लिये सहमत है तथा इस अनुबंध व राजस्थान विद्युत विनियामक आयोग द्वारा जारी किये गये राविविआ (ग्रिड पारस्परिक क्रिया वितरित अक्षय ऊर्जा उत्पादन तंत्र) विनियम, 2021 की शर्तों के अनुसार,

दोनों पक्षकार एतद्वारा निम्नानुसार सहमत हैः

1. **पात्रता**

1.1 नेट बिलिंग हेतु पात्रता राजस्थान विद्युत विनियामक आयोग के उपरोक्त कथित विनियमों में निर्धारित की गयी है। पात्र उपभोक्ता को ग्रिड/वितरण तंत्र में संघटित होने के लिये मानकों तथा शर्तों को पूरा करना होगा।

2. **तकनीकी तथा अन्तर्सम्बन्ध अपेक्षायें**

2.1 पात्र उपभोक्ता इससे सहमत है कि उसकी अक्षय ऊर्जा उत्पादन तंत्र तथा नेट बिलिंग प्रणाली राविविआ (ग्रिड पारस्परिक क्रिया वितरित अक्षय ऊर्जा उत्पादन तंत्र) विनियम, 2021 तथा समय-समय पर संशोधित निम्नलिखित विनियमों व कोडों में निर्धारित मानकों व अपेक्षाओं के अनुरूप होगा:

(क) केन्द्रीय विद्युत प्राधिकरण (वितरित विद्युत उत्पादन संसाधनों के संयोजन के लिये तकनीकी मानक) विनियम, 2013

(ख) केन्द्रीय विद्युत प्राधिकरण (मीटरों का अधिष्ठापन एवं प्रचालन) विनियम, 2006

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(ग) केन्द्रीय विद्युत प्राधिकरण (सुरक्षा तथा विद्युत आपूर्ति संबंधी उपाय) विनियम, 2010

(घ) राविविआ (विद्युत प्रदाय कोड तथा सम्बद्ध मामले) विनियम, 2021

2.2 पात्र उपभोक्ता इससे सहमत है कि डिस्कॉम के वितरण तंत्र से अक्षय ऊर्जा उत्पादन तंत्र को जोड़ने से पूर्व उसने एक पार्थक्य (आइसोलेशन) यंत्र (स्वचालित तथा इन्वटर के भीतर निर्मित व बाह्य हस्तचालित रिले दोनों) अधिष्ठापित कर लिये हैं या अधिष्ठापित कर लेगा तथा आवष्यक होने पर, इस तक डिस्कॉम के अभिगमन तथा इसके परिचालन तथा वितरण तंत्र की मरम्मत एवं संधारण की सहमति देता है।

2.3 पात्र उपभोक्ता सहमति देता है कि डिस्कॉम के तंत्र पर, विद्युत-बन्दी की दशा में अक्षय ऊर्जा उत्पादन तंत्र स्वतः विच्छेदित/वियोजित हो जायेगा और उसका संयंत्र अनुज्ञप्तिधारी के वितरण तंत्र में विद्युत का अन्तःक्षेपण नहीं करेगा।

2.4 वितरण तंत्र से जुड़े सभी उपकरण, सुसंगत अन्र्राष्ट्रीय (आईईईई/आईईसी) या भारतीय मानकों (बीआईएस) के अनुवर्ती होंगे तथा विद्युतीय उपकरणों की अधिष्ठापना समय-समय पर यथा संशोधित केन्द्रीय विद्युत प्राधिकरण (सुरक्षा तथा विद्युत आपूर्ति संबंधी उपाय) विनियम, 2010 की अनुपालना में होंगे।

2.5 पात्र उपभोक्ता सहमति देता है कि अनुज्ञप्तिधारी इण्टरफेस अन्तर्सम्बन्ध बिन्दु तथा मीटरिंग बिन्दु निर्धारित करेगा।

2.6 पात्र उपभोक्ता तथा अनुज्ञप्तिधारी संयंत्र के परिचालन व संधारण आलेख (ड्राइंग) तथा आरेख (डायग्राम) साइट उतरदायित्व अनुसूची, हार्मोनिक्स, सिंक्रोनाइजेशन, वोल्टेज आवृति, फ्लीकर आदि के संबंध में समय-समय पर यथा संशोधित केन्द्रीय विद्युत प्राधिकरण और राविविआ के सुसंगत विनियम तथा निर्देशों की अनुपालना के लिये सहमत है।

2.7 सुरक्षित तथा विश्वसनीय वितरण तंत्र के संधारण की अनुज्ञप्तिधारी की बाध्यता के कारण, पात्र उपभोक्ता सहमति देता है कि यदि डिस्कॉम द्वारा यह विनिर्धारित किया जाता है कि पात्र उपभोक्ता की या तो क्षति का कारक है तथा/या अन्य उपभोक्ताओं अथवा डिस्कॉम की परिसम्पतियों को प्रभावित करने वाले प्रतिकूल प्रभाव उत्पन्न करता है, तो पात्र उपभोक्ता को डिस्कॉम से निर्देश प्राप्त होने पर तुरन्त वितरण तंत्र से अक्षय ऊर्जा उत्पादन तंत्र को विच्छेदित कर लेगा तथा पुनर्सम्बन्ध से पूर्व स्वयं के व्यय पर समस्या का हल करेगा।

2.8 उपभोक्ता जब ग्रिड आपूर्ति अक्षय ऊर्जा उत्पादन तंत्र से पश्च फीडिंग के कारण मानव जीवन/जानवरों, जैसा भी है, को हुई किसी भी प्रकार की दुर्घटना (घातक/गैर-घातक/विभागीय/गैर-विभागीय) के लिये पूर्णतः उतरदायी होगा। ऐसी आपतकालीन स्थिति में जान व माल की दुर्घटना या क्षति को रोकने के लिये उपभोक्ता की अधिष्ठापना को किसी भी समय विच्छेदित करने का वितरण अनुज्ञप्तिधारी को अधिकार सुरक्षित रखता है।

3. **निर्बाधन तथा स्वीकृतियां**

3.1 पात्र उपभोक्ता अक्षय ऊर्जा उत्पादन तंत्र को वितरण तंत्र से जोड़ने से पूर्व सभी आवश्यक स्वीकृतियां तथा निर्बाधन (पर्यावरणीय तथा ग्रिड कनेक्शन संबंधी) प्राप्त करेगा।

4. **अभिगमन तथा विच्छेदन**

4.1 डिस्कॉम हर समय मीटरिंग उपकरणों तथा अक्षय ऊर्जा उत्पादन तंत्र को विच्छेदित करने वाले साधनों (स्वतः तथा हस्तचालित दोनों) तक अभिगमन कर सकेगा।

4.2 आपात या विद्युत बन्दी (आउटेज) की स्थिति में, जहां विच्छेदित करने वाले साधनों स्वतः तथा हस्तचालित जैसे स्विच या ब्रेकर, तक अभिगमन उपलब्ध नहीं है, तो डिस्कॉम पात्र उपभोक्ता के परिसर की सेवा विच्छेदित कर सकता है।

5. **दायित्व**

5.1 पात्र उपभोक्ता तथा डिस्कॉम, कनेक्न तथा अक्षय ऊर्जा उत्पादन तंत्र या डिस्कॉम के वितरण तंत्र के परिचालन में किसी भी पक्षकार की लापरवाही या साभिप्राय दुराचरण से क्षतियों या प्रतिकूल प्रभाव के लिये एक दूसरे की क्षतिपूर्ति करेंगे।

5.2 डिस्कॉम तथा पात्र उपभोक्ता एक दूसरे के प्रति किसी भी हानि या लाभ या राजस्व, व्यवसाय अवरोध हानियां, संविदा की हानि या कीर्तिस्व (गुडविल) की हानि के लिये दाण्डिकया उदाहरणात्मक क्षतियों सहित परन्तु तक सीमित नहीं विशेष क्षतियों, चाहे उक्त में कोई भी दायित्व, हानि संविदा में पैदा हुयी हो या अन्यथा के लिये उतरदायी नहीं होंगे।

5.3 डिस्कॉम पात्र उपभोक्ता द्वारा किसी राजकोषीय या आवेग द्वारा इसके सुसंगत आदेष में निर्धारित विषय क्षेत्र से परे केन्द्रीय/राज्य सरकार द्वारा दिये गये अन्य प्रोत्साहन के परिदान या प्रापण के लिये उतदायी नहीं होगा।

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5.4 डिस्कॉम नेट बिलिंग व्ययवस्था के अन्तर्गत अक्षय ऊर्जा उत्पादन तंत्र से विद्युत उत्पादन के परिमाण को अक्षय ऊर्जा बाध्यता के प्रति स्वीकार कर सकता है।

5.5 सीडीएम लाभों से प्राप्त प्रतिफल डिस्कॉम द्वारा प्रधिरित किये जायेगे।

6. वाणिज्यिक व्यवस्थापन

6.1 इस अनुबंध के अन्तर्गत समस्त वाणिज्यिक व्यवस्थापन, समय-समय पर यथासंशोधित राविविआ (ग्रिड पारस्परिक क्रिया वितरित अक्षय ऊर्जा उत्पादन तंत्र) विनियम, 2021 की अनुपालना करेंगे।

7. **कनेक्शन लागत**

7.1 पात्र उपभोक्ता मीटरिंग तथा अन्तर्सम्बन्ध लागतों सहित अक्षय ऊर्जा उत्पादन तंत्र स्थापित करने की समस्त लागते वहन करेगा। पात्र उपभोक्ता आवश्यक होने पर अक्षय ऊर्जा उत्पादन तंत्र को ग्रिड से जोड़ने के लिये वाछित सर्विस लाइन के आशोधन तथा उन्नयन की वास्तविक लागत के भुगतान के लिये सहमत है।

8. **समाप्ति**

8.1 परस्पर सहमति द्वारा यह अनुबंध किसी भी समय पर समाप्त किया जा सकता है।

8.2 इस अनुबंध को समाप्त कर दिये जाने पर पात्र उपभोक्ता अक्षय ऊर्जा उत्पादन तंत्र को डिस्कॉम के वितरण तंत्र से समयबद्ध तरीके से तथा डिस्कॉम की संतुष्टि तक विच्छेदित करेगा।

जिससे साक्ष्य में, श्री/श्रीमति ..... ने ..... (पात्र उपभोक्ता) के लिये तथा निमित तथा श्री/श्रीमति ..... ने ..... (डिस्कॉम) के लिये तथा निमित इस अनुबंध के दो मूल पर हस्ताक्षर करते है।

पात्र उपभोक्ता	वितरण अनुज्ञप्तिधारी
नाम	नाम
पता	पदनाम
सर्विस कनेक्शन संख्या	कार्यालय का पता

अनुलग्नक – IV-ब

<u>नेट मीटरिंग कनेक्शन अनुबन्ध का मॉडल</u>

यह अनुबन्ध ..... (अवस्थिति) में ..... (पता) पर परिसर के धारी पात्र उपभोक्ता ..... (प्रथम पक्षकार)

तथा

वितरण अनुज्ञप्तिधारी (आगे चलकर **IV** के रूप में कहा जायेगा) के प्रतिनिधि (अनुबन्ध के द्वितीय पक्षकार)..... (कार्यालय का पदनाम) एवं जिसका पंजीकृत कार्यालय..... (पता) पर स्थित है, के बीच वर्ष ..... के माह..... के इस दिवस ..... को किया जाता है।

तथा, यह कि डिस्कॉम, पात्र उपभोक्ता को ..... किवा की क्षमता अक्षय ऊर्जा उत्पादन तंत्र से उत्पादित विद्युत को डिस्कॉम के विद्युत तंत्र में अन्तःक्षेपण हेतु ग्रिड संयोजिता उपलब्ध करवाने के लिये सहमत है तथा इस अनुबंध व राजस्थान विद्युत विनियामक आयोग द्वारा जारी किये गये राविविआ (ग्रिड पारस्परिक क्रिया वितरित अक्षय ऊर्जा उत्पादन तंत्र) विनियम, 2021 की शर्तों के अनुसार,

दोनों पक्षकार एतद्द्वारा निम्नानुसार सहमत हैः

1. **पात्रता**

1.1 नेट मीटरिंग हेतु पात्रता राजस्थान विद्युत विनियामक आयोग के उपरोक्त कथित विनियमों में निर्धारित की गयी है। पात्र उपभोक्ता को ग्रिड/वितरण तंत्र में संघटित होने के लिये मानकों तथा शर्तों को पूरा करना होगा।

2. **तकनीकी तथा अन्तर्सम्बन्ध अपेक्षायें**

2.1 पात्र उपभोक्ता इससे सहमत है कि उसकी अक्षय ऊर्जा उत्पादन तंत्र तथा नेट मीटरिंग प्रणाली राविविआ (ग्रिड पारस्परिक क्रिया वितरित अक्षय ऊर्जा उत्पादन तंत्र) विनियम, 2021 तथा समय-समय पर संशोधित निम्नलिखित विनियमों व कोडों में निर्धारित मानकों व अपेक्षाओं के अनुरूप होगा:

(क) केन्द्रीय विद्युत प्राधिकरण (वितरित विद्युत उत्पादन संसाधनों के संयोजन के लिये तकनीकी मानक) विनियम, 2013

(ख) केन्द्रीय विद्युत प्राधिकरण (मीटरों का अधिष्ठापन एवं प्रचालन) विनियम, 2006

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(ग) केन्द्रीय विद्युत प्राधिकरण (सुरक्षा तथा विद्युत आपूर्ति संबंधी उपाय) विनियम, 2010

(घ) राविविआ (विद्युत प्रदाय कोड तथा सम्बद्ध मामले) विनियम, 2021

2.2 पात्र उपभोक्ता इससे सहमत है कि डिस्कॉम के वितरण तंत्र से अक्षय ऊर्जा उत्पादन तंत्र को जोड़ने से पूर्व उसने एक पार्थक्य (आइसोलेशन) यंत्र (स्वचालित तथा इन्वटर के भीतर निर्मित व बाह्य हस्तचालित रिले दोनों) अधिष्ठापित कर लिये हैं या अधिष्ठापित कर लेगा तथा आवश्यक होने पर, इस तक डिस्कॉम के अभिगमन तथा इसके परिचालन तथा वितरण तंत्र की मरम्मत एवं संधारण की सहमति देता है।

2.3 पात्र उपभोक्ता सहमति देता है कि डिस्कॉम के तंत्र पर, विद्युत-बन्दी की दशा में अक्षय ऊर्जा उत्पादन तंत्र स्वतः विच्छेदित/वियोजित हो जायेगी और उसका संयंत्र अनुज्ञप्तिधारी के वितरण तंत्र में विद्युत का अन्तःक्षेपण नहीं करेगा।

2.4 वितरण तंत्र से जुड़े सभी उपकरण, सुसंगत अन्तर्राष्ट्रीय (आईईईई/आईईसी) या भारतीय मानकों (बीआईएस) के अनुवर्ती होंगे तथा विद्युतीय उपकरणों की अधिष्ठापना समय-समय पर यथा संशोधित केन्द्रीय विद्युत प्राधिकरण (सुरक्षा तथा विद्युत आपूर्ति संबंधी उपाय) विनियम, 2010 की अनुपालना में होंगे।

2.5 पात्र उपभोक्ता सहमति देता है कि अनुज्ञप्तिधारी इण्टरफेस अन्तर्सम्बन्ध बिन्दु तथा मीटरिंग बिन्दु निर्धारित करेगा।

2.6 पात्र उपभोक्ता तथा अनुज्ञप्तिधारी संयंत्र के परिचालन व संधारण आलेख (ड्राइंग) तथा आरेख (ड्रायग्राम) साइट उतरदायित्व अनुसूची, हार्मोनिक्स, सिंक्रोनाइजेशन, वोल्टेज आवृति, फ्लीकर आदि के संबंध में समय-समय पर यथा संशोधित केन्द्रीय विद्युत प्राधिकरण और राविविआ के सुसंगत विनियम तथा निर्देशों की अनुपालना के लिये सहमत है।

2.7 सुरक्षित तथा विश्वसनीय वितरण तंत्र के संधारण की अनुज्ञप्तिधारी की बाध्यता के कारण, पात्र उपभोक्ता सहमति देता है कि यदि डिस्कॉम द्वारा यह विनिर्धारित किया जाता है कि पात्र उपभोक्ता की या तो क्षति का कारक है तथा/या अन्य उपभोक्ताओं अथवा डिस्कॉम की परिसम्पतियों को प्रभावित करने वाले प्रतिकूल प्रभाव उत्पन्न करता है, तो पात्र उपभोक्ता को डिस्कॉम से निर्देश प्राप्त होने पर तुरन्त वितरण तंत्र से अक्षय ऊर्जा उत्पादन तंत्र को विच्छेदित कर लेगा तथा पुनर्सम्बन्ध से पूर्व स्वयं के व्यय पर समस्या का हल करेगा।

2.8 उपभोक्ता जब ग्रिड आपूर्ति अक्षय ऊर्जा उत्पादन तंत्र से पश्च फीडिंग के कारण मानव जीवन/जानवरों, जैसा भी है, को हुई किसी भी प्रकार की दुर्घटना (घातक/गैर-घातक/विभागीय/गैर-विभागीय) के लिये पूर्णतः उतरदायी होगा। ऐसी आपतकालीन स्थिति में जान व माल की दुर्घटना या क्षति को रोकने के लिये उपभोक्ता की अधिष्ठापना को किसी भी समय विच्छेदित करने का वितरण अनुज्ञप्तिधारी को अधिकार सुरक्षित है।

3. **निर्बाधन तथा स्वीकृतियां**

3.1 पात्र उपभोक्ता अक्षय ऊर्जा उत्पादन तंत्र को वितरण तंत्र से जोड़ने से पूर्व सभी आवश्यक स्वीकृतियां तथा निर्बाधन (पर्यावरणीय तथा ग्रिड कनेक्शन संबंधी) प्राप्त करेगा।

4. **अभिगमन तथा विच्छेदन**

4.1 डिस्कॉम हर समय मीटरिंग उपकरणों तथा अक्षय ऊर्जा उत्पादन तंत्र को विच्छेदित करने वाले साधनों (स्वतः तथा हस्तचालित दोनों) तक अभिगमन कर सकेगा।

4.2 आपात या विद्युत बन्दी (आउटेज) की स्थिति में, जहां विच्छेदित करने वाले साधनों स्वतः तथा हस्तचालित जैसे स्विच या ब्रेकर, तक अभिगमन उपलब्ध नहीं है, तो डिस्कॉम पात्र उपभोक्ता के परिसर की सेवा विच्छेदित कर सकता है।

5. **दायित्व**

5.1 पात्र उपभोक्ता तथा डिस्कॉम, कनेक्शन तथा अक्षय ऊर्जा उत्पादन तंत्र या डिस्कॉम के वितरण तंत्र के परिचालन में किसी भी पक्षकार की लापरवाही या साभिप्राय दुराचरण से क्षतियों या प्रतिकूल प्रभाव के लिये एक दूसरे की क्षतिपूर्ति करेंगे।

5.2 डिस्कॉम तथा पात्र उपभोक्ता एक दूसरे के प्रति किसी भी हानि या लाभ या राजस्व, व्यवसाय अवरोध हानियां, संविदा की हानि या कीर्तिस्व (गुडविल) की हानि के लिये दाण्डिकया उदाहरणात्मक क्षतियों सहित परन्तु तक सीमित नहीं विशेष क्षतियों, चाहे उक्त में कोई भी दायित्व, हानि संविदा में पैदा हुयी हो या अन्यथा के लिये उतरदायी नहीं होंगे।

5.3 डिस्कॉम पात्र उपभोक्ता द्वारा किसी राजकोषीय या आवेग द्वारा इसके सुसंगत आदेष में निर्धारित विषय क्षेत्र से परे केन्द्रीय/राज्य सरकार द्वारा दिये गये अन्य प्रोत्साहन के परिदान या प्रापण के लिये उतरदायी नहीं होगा।

Annexure-IV

5.4 डिस्कॉम नेट मीटरिंग व्ययवस्था के अन्तर्गत अक्षय ऊर्जा उत्पादन तंत्र से विद्युत उत्पादन के परिमाण को अक्षय ऊर्जा बाध्यता के प्रति स्वीकार कर सकता है।

5.5 सीडीएम लाभों से प्राप्त प्रतिफल डिस्कॉम द्वारा प्रधिारित किये जायेगे।

6. **वाणिज्यिक व्यवस्थापन**

6.1 इस अनुबंध के अन्तर्गत समस्त वाणिज्यिक व्यवस्थापन, समय-समय पर यथासंशोधित राविविआ (ग्रिड पारस्परिक क्रिया वितरित अक्षय ऊर्जा उत्पादन तंत्र) विनियम, 2021 की अनुपालना करेंगे।

7. **कनेक्शन लागत**

7.1 पात्र उपभोक्ता मीटरिंग तथा अन्तर्सम्बन्ध लागतों सहित अक्षय ऊर्जा उत्पादन तंत्र स्थापित करने की समस्त लागते वहन करेगा। पात्र उपभोक्ता आवश्यक होने पर अक्षय ऊर्जा उत्पादन तंत्र को ग्रिड से जोड़ने के लिये वाछित सर्विस लाइन के आषोधन तथा उन्नयन की वास्तविक लागत के भुगतान के लिये सहमत है।

8. **समाप्ति**

8.1 परस्पर सहमति द्वारा यह अनुबंध किसी भी समय पर समाप्त किया जा सकता है।

8.2 इस अनुबंध को समाप्त कर दिये जाने पर पात्र उपभोक्ता अक्षय ऊर्जा उत्पादन तंत्र को डिस्कॉम के वितरण तंत्र से समयबद्ध तरीके से तथा डिस्कॉम की संतुष्टि तक विच्छेदित करेगा।

जिससे साक्ष्य में, श्री/श्रीमति ..... ने ..... (पात्र उपभोक्ता) के लिये तथा निमित तथा श्री/श्रीमति ..... ने ..... (डिस्काम) के लिये तथा निमित इस अनुबंध के दो मूल पर हस्ताक्षर करते है।

पात्र उपभोक्ता	वितरण अनुज्ञप्तिधारी
नाम	नाम
पता	पदनाम
सर्विस कनेक्शन संख्या	कार्यालय का पता

अनुलग्नक - v

<u>उपभोक्ता के मीटर के पीछे अक्षय ऊर्जा उत्पादन तंत्र के अधिष्ठापन के लिये पूर्व सूचना</u>

दिनांक .....

स्थान.....

(वितरण अनुज्ञप्तिधारी के सम्बन्धित अधिकारी को सम्बोधित किया जायेगा)

सेवा में,

.....
.....
.....

विषयः मीटर के पीछे अक्षय ऊर्जा उत्पादन तंत्र की सुविधा के अधिष्ठापन के लिये पूर्व सूचना1

महोदय/महोदया,

मैं, अधोहस्ताक्षरकर्ता ..... (उपभोक्ता का नाम)....., उपभोक्ता खाता संख्या.....मेरे मीटर (मीटर संख्या.....) के पीछे से सम्बद्ध होने हेतु अक्षय ऊर्जा उत्पादन तंत्र के अधिष्ठापन के लिये राविविआ (ग्रिड पारस्परिक क्रिया वितरित अक्षय ऊर्जा उत्पादन तंत्र) विनियम, 2021 के अनुसार पूर्व सूचना दे रहा हूं।
मैं निम्नलिखित विवरण प्रस्तुत कर रहा हूं

क) उपभोक्ता खाता संख्या :.....

(ख) उपभोक्ता की श्रेणी :.....

(ग) सम्बद्ध भार(किलोवाट)/अनुबन्ध मांग(केवीए) :.....

(घ) अक्षय ऊर्जा उत्पादन तंत्र की क्षमता :.....

(ड) अन्तःसम्बन्ध बिन्दू :.....

(च) क्या अक्षय ऊर्जा उत्पादन तंत्र के लिये लोड को अलग किया गया है: (हाँ/नहीं)

(छ) क्या अक्षय ऊर्जा उत्पादन तंत्र को वितरण सिस्टम के समानान्तर सम्बद्ध किया जाना हैः (हाँ/नहीं)

Annexure-IV

आपका

(हस्ताक्षर)

नामः .....

पताः.....

मोबाइल/दूरभाष नम्बरः.....

अनुलग्नक - VI

इन्वर्टर मानक

इन्वर्टर मानक को दक्षता तथा मापन के लिये आईईसी 61683/आईएस 61683 की अनुपालना तथा पर्यावरणीय परीक्षण के लिये आईईसी 60068-2 (1,2,14,30)/समतुल्य बीआईएस मानक की अनुपालना करनी चाहिए।

इन्वर्टर को निरन्तर ग्रिड की स्थिति का पर्यवेक्षण करना चाहिए तथा ग्रिड की विफलता (या) कम वोल्टेज (या) अधिक वोल्टेज की दशा में अक्षय ऊर्जा उत्पादन तंत्र को इन्वर्टर में लगे सक्रिट ब्रेकर/ऑटो स्विच द्वारा विच्छेदित कर दिया जाना चाहिए तथा इन विनियमों के विनियम 10 पर निर्धारित अपेक्षाओं की अनुपालना करेगा।

हार्मोनिक मानक

मानक आईईई 519 के अनुसार अनुज्ञेय व्यष्टिक हार्मोनिक स्तर 3 प्रतिशत से कम (वोल्टेज तथा करण्ट हार्मोनिक्स, दोनों के लिये) होंगे तथा तंत्र के कुल हार्मोनिक विरूपण (टीएचडी) वोल्टेज तथा करण्ट हार्मोनिक्स दोनों के लिये 5 प्रतिशत से कम होंगे।

तकनीकी तथा अन्तर्सम्बन्ध अपेक्षा पैरामीटर

मीटर	संदर्भ	अपेक्षा
सेवा की पूर्णरूपेण स्थिति	राज्य वितरण/प्रदाय कोड	आपूर्ति के निबन्धन व शर्तों की अनुपालना
पूर्णरूपेण ग्रिड मानक	केन्द्रीय विद्युत प्राधिकरण (ग्रिड मानक) विनियम, 2010 और उसके पश्चातवर्ती	आवृत्ति, वोल्टेज तथा संरक्षण समन्वय के संबंध में ग्रिड मानकों की अनुपालना

	संशोधन	
मीटर	समय-समय पर यथा संशाधित केन्द्रीय विद्युत प्राधिकरण (मीटरों की अधिष्ठापना एवं प्रचालन) विनियम, 2006 तथा राविविआ विनियम एवं निर्देश	मीटरों के विनिर्देशनों की अनुपालना
सुरक्षा तथा आपूर्ति	केन्द्रीय विद्युत प्राधिकरण (सुरक्षा तथा विद्युत आपूर्ति संबंधी उपाय) विनियम, 2010 और उसके पश्चातवर्ती संशोधन	विद्युतीय अधिष्ठापनाओं तथा 650 वोल्टेज से नीचे तथा ऊपर के उपस्करों के लिये सुरक्षा प्रावधानों की अनुपालना
हार्मोनिक अपेक्षायें हार्मोनिक करण्ट	आइईईई 519 केविप्रा (वितरित विद्युत उत्पादन संसाधनों के संयोजन के लिये तकनीकी मानक) विनियम, 2013 और उसके पश्चातवर्ती संशोधन	अन्तर्सम्बन्ध बिन्दु पर वोल्टेज के लिये कुल हार्मोनिक विरूपण (टीएचडी) 5 प्रतिषत से अधिक नहीं होने चाहिए। करण्ट विरूपण सीमाओं के लिये कुल मांग विरूपण (टीडीडी) मांग करण्ट (एलएससी/एलएल) के लिये उपलब्ध शार्ट सक्रिट करण्ट के संदर्भ में टीडीडी मूल्यों के लिये विभिन्न हार्मोनिक्स हेतु निर्धारित सीमाओं में रहने चाहिए।
सिंक्रोनाइजेशन	केविप्रा (वितरित विद्युत उत्पादन संसाधनों के संयोजन के लिये तकनीकी मानक) विनियम, 2013 और उसके पश्चातवर्ती संशोधन	अक्षय ऊर्जा उत्पादन तंत्र ग्रिड आवृति सिंक्रोनाइजेशन यंत्र से लैस होना चाहिए। हर समय उत्पादन केन्द्र विद्युत तंत्र के लिये संक्रमित होना है, यह अन्तर्सम्बन्ध बिन्दु पर +/-5 प्रतिशत से अधिक वोल्टेज के उतार - चढ़ाव का कारक नहीं होगा।
वोल्टेज	केविप्रा (वितरित विद्युत	वोल्टेज प्रचालन खिड़की को न्यूसैंस ट्रिपिंग

Annexure-IV

	उत्पादन संसाधनों के संयोजन के लिये तकनीकी मानक) विनियम, 2013 और उसके पश्चातवर्ती संशोधन	को कम करना चाहिए तथा सांकेतिक सम्बद्ध वोल्टेज के 80 प्रतिशत से 110 प्रतिशत की परिचालनीय रोज के अन्दर-अन्दर होना चाहिए। अक्षय ऊर्जा उत्पादन तंत्र को 2 सैकण्ड के क्लियरिंग समय के अन्दर-अन्दर अपने आपको ग्रिड से वियोजित कर लेना चाहिए।
फ्लीकर	के विप्रा (वितरित विद्युत उत्पादन संसाधनों के संयोजन के लिये तकनीकी मानक) विनियम, 2013 और उसके पश्चातवर्ती संशोधन	अक्षय ऊर्जा उत्पादन तंत्र के परिचालन में आईसी 61000 मानकों में निम्नानुसार उल्लिखित सीमा से अधिक वोल्टेज फ्लीकर नहीं करना चाहिए:-
		अल्पकालीन फ्लीकर (पीएसटी): अल्पावधि समय (10 मिनिट) में मूल्यांकित फ्लीकर तीव्रता <=1 होनी चाहिए। दीर्घकालीन स्फुरण (पीएलटी): दीर्घावधि के समय (आमतौर पर 2 घण्टे) में मूल्यांकित फ्लीकर तीव्रता <=0.65 हानी चाहिए।
आवृति	केविप्रा (वितरित विद्युत उत्पादन संसाधनों के संयोजन के लिये तकनीकी मानक) विनियम, 2013 और उसके पश्चातवर्ती संशोधन	जब वितरण तंत्र की आवृति निर्धारित परिस्थितयों के बाहर (50.5 हर्टज ऊपर की ओर तथा 47.5 हर्टज नीचे की ओर) विचलित होती है, तो 0.2 सैकण्ड के क्लीयरिंग समय के साथ अधिक तथा कम आवृति ट्रिप फंक्शन होने चाहिए।
डीसी अन्तःक्षेपण	केविप्रा (वितरित विद्युत उत्पादन संसाधनों के संयोजन के लिये तकनीकी मानक)	किसी भी परिचालनीय परिस्थिति में अक्षय ऊर्जा उत्पादन तंत्र अन्तर्सम्बन्ध बिन्दु पर पूरे रेट उत्पादन का 0.5 प्रतिशत या वितरण तंत्र में रेटैड इन्वर्टर उत्पादन करण्ट के 1

	विनियम, 2013 और उसके पश्चातवर्ती संशोधन	प्रतिषत से अधिक डीसी अन्तःक्षेपित नहीं करनी चाहिए।
पावर फैक्टर	केविप्रा (वितरित विद्युत उत्पादन संसाधनों के संयोजन के लिये तकनीकी मानक) विनियम, 2013 और उसके पश्चातवर्ती संशोधन	जब इन्वर्टर का उत्पादन 50 प्रतिषत से अधिक है, तो इन्वर्टर से विद्युत उत्पादन, 0.9 से अधिक लैगिंग पावर फैक्टर से युक्त होगा।
आइलैण्डिग तथा विच्छेदन	केविप्रा (वितरित विद्युत उत्पादन संसाधनों के संयोजन के लिये तकनीकी मानक) विनियम, 2013 और उसके पश्चातवर्ती संशोधन	अक्षय ऊर्जा उत्पादन तंत्र को दोष, वोल्टेज या आवृति विचलनों की दशा में आईईसी मानकों में अनुबद्ध समय के अन्दर-अन्दर अपने आपको आईलैण्ड/वियोजित कर लेना चाहिए।
अधिक भार तथा अधिक ताप	केविप्रा (वितरित विद्युत उत्पादन संसाधनों के संयोजन के लिये तकनीकी मानक) विनियम, 2013 और उसके पश्चातवर्ती संशोधन	अधिक भार या अधिक ताप की दशा तें इन्वर्टर में स्वतः बन्द होने की तथा सामान्य स्थिति होने पर पुनः चालू होने की सुविधा होनी चाहिए।
समानान्तर यंत्र	केविप्रा (वितरित विद्युत उत्पादन संसाधनों के संयोजन के लिये तकनीकी मानक) विनियम, 2013 और उसके पश्चातवर्ती संशोधन	अक्षय ऊर्जा उत्पादन तंत्र के समानान्तर यंत्र को अन्तर्सम्बन्ध बिन्दु पर सामान्य वोल्टेज के 220 प्रतिशत तक सह सकने में समर्थ होना चाहिए।

Annexure-IV

RAJASTHAN ELECTRICITY REGULATORY COMMISSION

NOTIFICATION

Jaipur, April 08, 2021

No. RERC/Secy/Reg – 144 In exercise of powers conferred under Section 181 read with Sections 61, 66, 86(1)(e) of the Electricity Act, 2003 (Act 36 of 2003) and all other provisions enabling it in this behalf, the Rajasthan Electricity Regulatory Commission after previous publication, hereby makes the following Regulations for Grid Interactive Distributed Renewable Energy Generating Systems.

1 Short title, extent and commencement

1.1 These Regulations shall be called the Rajasthan Electricity Regulatory Commission (Grid Interactive Distributed Renewable Energy Generating Systems) Regulations, 2021.

1.2 These Regulations shall extend to the whole State of Rajasthan.

1.3 These Regulations shall come into force from the date of their publication in the Official Gazette.

1.4 These Regulations shall remain in force along with the Rajasthan Electricity Regulatory Commission (Connectivity and Net Metering for Rooftop and Small Solar Grid Interactive Systems) Regulations, 2015 and subsequent amendments thereof:

Provided that, Rooftop and Small Solar Grid Interactive Systems commissioned under Net Metering agreements up to 30th June 2021 shall be governed as per the Rajasthan Electricity Regulatory Commission (Connectivity and Net Metering for Rooftop and Small Solar Grid Interactive Systems) Regulations, 2015 and subsequent amendments thereof.

2 Definitions

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) "Billing cycle or billing period" means the period for which regular electricity bills as stipulated by the Commission, are prepared for different categories of consumers by the Licensee;

(c) "Check meter" means a meter, which shall be connected to the same core of the Current Transformer (CT) and Voltage Transformer (VT) to which main meter is connected and shall be used for accounting and billing of electricity in case of failure of the main Net Meter or RE Generation Meter;

(d) "Commission" means Rajasthan Electricity Regulatory Commission constituted under the Act;

(e) "Connected Load' shall mean the sum of rated capacities of all the electricity energy

consuming devices on the consumer's premises, which can be operated simultaneously. For the purpose of levy of any charges and for deciding the supply voltage, the Connected Load shall be determined as per method prescribed in the Rajasthan Electricity Regulatory Commission (Electricity Supply Code and Connected Matters) Regulations, 2021 and subsequent amendments thereto;

(f) "Connection Agreement" means the agreement entered into between the Distribution Licensee and the consumer;

(g) "Contract Demand" for the purpose of the Regulations means the demand in kilowatt ('kW') or kilovolt ampere ('kVA') or Horse Power ('HP'), as mutually agreed between the Distribution Licensee and the consumer, and as entered into in an agreement with the Distribution Licensee in accordance with the Rajasthan Electricity Regulatory Commission (Electricity Supply Code and Connected Matters) Regulations, 2021 and subsequent amendments thereto or equal to the Sanctioned Load, where the Contract Demand has not been provided in such agreement;

(h) "Distribution Licensee" or "Licensee" means a person granted a licence under Section 14 of the Act or deemed Licensee as per 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;

(i) "Electricity Supply Code" means the Electricity Supply Code specified under Section 50 of the Act and subsequent amendments thereof;

(j) "Eligible Consumer" means a consumer of electricity in the area of supply of the Distribution Licensee, who uses or proposes to use a Renewable Energy generating system installed in the consumer premises, to offset all or part or no part of the consumer's own electrical requirements, given that such systems may be owned and/or operated by such consumer or Distribution Licensee or RESCO;

(k) "Financial year" or "year" means the period beginning from first day of April in an English calendar year and ending with the thirty first day of March of the next year;

(l) "Interconnection Point" means interface of Renewable Energy generating system with the outgoing terminals of the meter/Distribution Licensee's cut-outs/switchgear fixed in the premises of the Eligible Consumer:

Provided that, in case of an Eligible Consumer connected at the High Tension (HT) level, the "Interconnection Point" shall mean the interface of the Renewable Energy Generating System with the outgoing terminals of the Distribution Licensees' metering cubicle placed before such consumer's apparatus;

(m) "Invoice" means either a periodic bill / supplementary bill or a periodic Invoice/ supplementary invoice raised by the Distribution Licensee;

(n) "kVAh" means kilo volt ampere hour;

(o) "kWp" means kilo watt peak;

(p) "MNRE" means Ministry of New and Renewable Energy, Government of India;

(q) "Net Billing" means an arrangement under which energy generated by the Renewable Energy Generating system is purchased by the Distribution Licensee and the Distribution Licensee raises the bills on the consumer for his consumption at the approved retail supply tariff, after giving credit for total generated electricity at the applicable Tariff;

Annexure-IV

(r) "Net meter" means a bi-directional energy meter capable of recording both import and export of electricity or a pair of meters one each for recording the import and export of electricity, as the case may be;

(s) "Net Metering Arrangement" means an arrangement under which a Renewable Energy Generating System with Net Meter installed at an Eligible Consumer's premises, delivers surplus electricity, if any, to the Distribution Licensee after setting off the quantum of electricity supplied by such Licensee during the applicable Billing Period;

(t) "Obligated Entity" means the entity mandated under clause (e) of sub-Section (1) of Section 86 of the Act to fulfil the renewable purchase obligation and identified under RERC (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010, as amended from time to time;

(u) "Premises" means rooftops or/and areas 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;

(v) "Renewable Energy Certificate (REC)" means the certificate issued in accordance with the 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;

(w) "Renewable Energy Generating System" means the generating systems other than conventional generating systems, generating electricity from Renewable Energy Sources with or without storage;

(x) "Renewable Energy Sources" means renewable source of energy such as water, wind, sunlight, biomass, bagasse, municipal solid waste and any other such sources as approved by the MNRE from time to time;

(y) "RESCO" means Renewable Energy Service Company, which owns a Renewable Energy System and provides renewable energy to the consumer:
Provided that the Distribution Licensee may act as a RESCO. However, this business shall be treated as other business of the Distribution Licensee;

(z) "RE Generation Meter" means an energy meter used for measuring the energy generated by Renewable Energy generating system for the purpose of accounting and billing;

(aa) "Sanctioned Load" means the demand in kilowatt ('kW') or Horse Power ('HP'), as mutually agreed between the Distribution Licensee and the consumer;

(bb) "Settlement Period" means the period at the end of which Net Metering/ Net Billing settlement between the Distribution Licensee and the consumer takes place, generally beginning from the first day of April of a calendar year and ending with the thirty-first day of March of the following calendar year;

(cc) 'Storage' means energy storage system utilizing methods and technologies like, Solid State Batteries, Flow Batteries, Pumped Storage, Compressed Air, fuel cells, hydrogen storage or any other technology, to store various forms of energy and to deliver the stored energy in the form of electricity;

2.2 The words and expressions used in these Regulations and not defined herein, but defined in the Act or any other Regulations of the Commission, shall have the meaning assigned to them under the Act or any other Regulations of the Commission.

2.3 Abbreviations used in these Regulations shall have the meanings as stated in **Annexure – I.**

3 Scope and Applicability

3.1 These Regulations shall apply to the Distribution Licensee and consumers availing supply from such Distribution Licensee, in its area of supply in the State of Rajasthan.

3.2 These Regulations shall apply to:

(a) Net Metering arrangements;
(b) Net Billing arrangements;
(c) Grid Interactive Distributed Renewable Energy generating systems connected behind the meter and operating in parallel with Distribution Licensees' grid and who have not opted either for Net Metering arrangement or Net Billing arrangement:

Provided that, the eligibility for Net Metering arrangement shall be as stipulated under the Electricity (Rights of Consumers) Rules, 2020, as amended from time to time:

Provided further that, for the purpose of implementation of the Electricity (Rights of Consumers) Rules, 2020 the Commission may issue necessary directions or orders, if need be, as and when required.

Provided also that the Net Metering arrangement for the eligible consumers shall be allowed subject to technical feasibility:

Provided also that, co-located Renewable Energy based captive power plants up to one mega-watt installed capacity may opt to be set up under these Regulations or the Rajasthan Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020:

Provided also that such option, once exercised, cannot be changed.

3.3 The Eligible Consumer may install the Renewable Energy generating system under the Net Billing arrangement or Net Metering arrangement, subject to the proviso under Regulation 3.2 which,

(a) shall be within the permissible technical limits as defined under these Regulations;
(b) shall be located in the consumer premises;
(c) shall interconnect at the same interconnection point of consumer premises and operate safely in parallel with the Distribution Licensee's network.

3.4 These Regulations shall be applicable to all Grid interactive Distributed Renewable Energy generating systems that are commissioned on or after 1st July 2021:

Provided that, Rooftop and Small Solar Grid Interactive Systems commissioned under Net Metering agreements up to 30th June 2021, shall continue to operate under the Net Metering arrangement till the period of Connection Agreement, as per the provisions of the Rajasthan Electricity Regulatory Commission (Connectivity and Net Metering for Rooftop and Small Solar Grid Interactive Systems) Regulations, 2015 and subsequent amendments thereof:

Provided further that, the consumer, who has opted for Net Metering arrangement prior to or after notification of these Regulations, shall be allowed to enter into Net Billing arrangement only after termination of existing Connection Agreement under Net Metering arrangement.

3.5 These Regulations do not preclude the right of State Nodal Agency or Distribution Licensee of the State to undertake Renewable Energy generating system of one mega-wattand above capacity through alternative mechanisms.

4 General Principles

4.1 The Distribution Licensee shall offer the provision of Net Billing arrangement or Net Metering arrangement to the Eligible Consumer, who intends to install Grid Interactive Distributed Renewable Energy generating system in its area of supply on non-discriminatory and 'first come first serve' basis:

Provided that, the Consumer is eligible to install the Grid Interactive Distributed Renewable Energy generating systems subject to the technical limitations as specified under these Regulations:

Provided further that, the interconnection of such system with the grid is undertaken as specified under these Regulations and in compliance with the Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013, as amended from time to time.

4.2 Consumers having pending arrears with the Distribution Licensee shall not be eligible for Net Billing arrangement or Net Metering arrangement under these Regulations:

Provided that, where there is a dispute between the Distribution Licensee and the consumer, relating to any charge for electricity, such consumers shall be allowed Net Metering or Net Billing arrangement pending such resolution of such dispute upon deposit of the disputed amount with the Distribution Licensee in accordance with Section 56 of the Act.

5 Grid interactive Distributed Renewable Energy generating systems set up by RESCO

5.1 As per the provisions of the Electricity Act, 2003, the sale of electricity to individual consumers is only permitted by Distribution Licensee, Trading Licensee or through Open Access. However, in order to promote RE Generation, the Net Metering and Net Billing arrangement through Renewable Energy Service Company (RESCO) owned Renewable Energy generating system shall be permitted:

Provided that, the Eligible Consumer may lease out / rent the Rooftop Space/ Land/ Water bodies to a RESCO on a mutual commercial arrangement for setting up Renewable Energy generating system under Net Billing arrangement or Net Metering arrangement:

Provided further that, under Net Metering and Net Billing Arrangement, RESCO shall enter into a direct agreement with consumer as regards its payment. There will be no

tripartite agreement between RESCO, consumer and Distribution Licensee. Even in case of RESCO, the Net Metering/ Net Billing agreement shall be entered into between Distribution Licensee and eligible consumer:

Provided also that, the dispute between the consumer and the RESCO arising out of contractual obligations under the direct agreement shall be settled mutually by them and shall not be adjudicated by the Commission or Distribution Licensee. The Distribution Licensee shall not be the party to such dispute and shall not disconnect such consumer on the ground arising out of such dispute between consumer and the RESCO.

5.2 All provisions under these Regulations shall be applicable for Renewable Energy generating system set up by a RESCO.

6 Connectivity of Renewable Energy generating system

6.1 The cumulative capacity of Renewable Energy generating system to be allowed at a particular distribution transformer shall not exceed 50% of the capacity of such distribution transformer or such limit as may be stipulated by the Commission from time to time:

Provided that, in case of HT consumers where the distribution transformer has been installed by the consumer, the limit of 50% of distribution transformer capacity shall not be applicable. The total allowable solar installation capacity for such consumers shall be as per Regulation 7.2 of these Regulations.

6.2 The Distribution Licensee shall update the information about distribution transformer level capacity available for connecting Renewable Energy generating system under Net Billing arrangement or Net Metering arrangement on yearly basis and shall provide the information on its website.

7 Eligible Consumer and Individual Project Capacity

7.1 All Eligible Consumers of electricity in the area of supply of the Distribution Licensee having or proposing to install a Renewable Energy generating system may opt for grid connectivity under the Net Billing arrangement or Net Metering arrangement in accordance with these Regulations.

7.2 The maximum Renewable Energy generating system capacity to be installed at any Eligible Consumer's premises shall not exceed 100% of the Sanctioned Load/Contract Demand of the consumer:

Provided that, the capacity of the Renewable Energy generating system shall be in conformity with the provisions relating to the Sanctioned Load or Contract Demand permissible under the Rajasthan Electricity Regulatory Commission (Electricity Supply Code and Connected Matters) Regulations, 2021 and subsequent amendments thereto.

7.3 The capacity of Renewable Energy generating system to be installed at the premises of any Eligible Consumer shall be more than one kilo watt under Net Billing arrangement or Net Metering arrangement subject to the condition as specified in Regulation 7.2:

Provided that, the capacity of Renewable Energy generating system to be installed at the premises of any Eligible Consumer shall be up to one mega-watt under Net Metering arrangement or Net Billing arrangement:

Provided further that, in case the Eligible Consumer intends to install Renewable Energy generating system having capacity of more than one mega-watt, terms and conditions of such arrangement shall be governed as per the Rajasthan Electricity Regulatory Commission (Terms and Conditions for tariff determination from Renewable Energy Sources) Regulations, 2020 and subsequent amendments thereof.

7.4 The maximum Renewable Energy generating system capacity to be installed at an Eligible Consumer's premises shall be subject to the cumulative capacity of the relevant Distribution Transformer, which has already been utilized, as specified in these Regulations.

7.5 HT (11 kV and above) Consumers may install and connect Renewable Energy generating system at their LT Bus Bar System:

Provided that, in such cases, the RE Generation Meter or Net Meter shall be installed on the HT side of the Consumer's Transformer.

7.6 An Eligible Consumer may install or enhance the capacity of, or upgrade the Renewable Energy generating systems at different locations within the same premises after following due procedure and intimating the concerned Distribution Licensee:

Provided that, the total capacity of such systems within the same premises shall not exceed the capacity limits specified in these Regulations.

8 Procedure for application

8.1 The Distribution Licensee shall prominently display on its website and on the notice board in all its offices, the following:

(a) detailed procedure for grant of new arrangement;
(b) address and telephone numbers of offices where filled-up application forms can be submitted;
(c) address of website for online submission of application form;
(d) complete list of copies of the documents required to be attached with the application;
(e) all applicable charges to be deposited by the applicant.

8.2 The Distribution Licensee shall implement a web-based application processing system for processing the applications of the Eligible Consumers within three (3) months from the date of notification of these Regulations:

Provided that, the Distribution Licensee shall process the applications received through manual system till such web system is developed:

Provided further that, the Distribution Licensee shall create a web portal and a mobile app for submission of online application forms.

8.3 The Eligible Consumer who proposes to install a Renewable Energy generating system

in his premises shall apply in the application form (**Annexure – II)**, which the Distribution Licensee shall notify on its website along with the application fees as specified in the schedule (**Annexure-III**) of these Regulations.

8.4 The Consumer shall compulsorily provide details of e-mail address and mobile number, along with the application.

8.5 All correspondence by the Distribution Licensee with the Consumer shall be preferably through e-mail and mobile.

8.6 The Distribution Licensee shall acknowledge the receipt of the application and register the application and shall process the applications in the order of receipt.

8.7 The online application tracking mechanism based on the unique registration number shall be provided by the Distribution Licensee through web-based application or mobile app or through SMS or by any other mode to monitor the status of processing of the application.

8.8 Within twenty (20) days from the issuance of acknowledgement of the application, the concerned officer of the respective Sub-divisional office of the Distribution Licensee shall check the technical feasibility of the Renewable Energy generating system.

8.9 If technical feasibility is found satisfactory, the Distribution Licensee shall approve the application and intimate the same to the applicant by providing a Letter of Approval (LoA) via email/SMS/post, within thirty (30) days from the issuance of acknowledgement of the application.

8.10 In case of any deficiencies found in the application during technical feasibility study, on account of Renewable Energy generating system capacity and available transformer loading as specified under these Regulations, the same shall be intimated by the Distribution Licensee to the applicant through email/SMS/post within twenty (20) working days from the issuance of acknowledgement of the application.

8.11 The applicant shall remove all identified deficiencies within a period of fifteen (15) days from the receipt of intimation and intimate the Distribution Licensee about the resolution of deficiencies through email/post:

Provided that, the Distribution Licensee shall assess the resolution of deficiencies and provide LoA to the applicant upon its satisfaction:

Provided further that, in case deficiencies are not removed in the said period, the application shall stand cancelled:

Provided also that, the consumer may make re-application after rectification of deficiencies:

Provided also that, in case approval cannot be granted due to inadequate Distribution Transformer capacity or any other technical constraints, the consumer should be informed through written communication only, specifying the reasons of the rejection:

Provided also that, the application may be considered, in chronological order of seniority and if the Consumer so opts, after such Distribution Transformer capacity becomes available/technical constraint is rectified.

8.12 After installation of Renewable Energy generating system, the consumer shall submit the installation certificate to the Distribution Licensee. The Distribution Licensee shall complete signing of connection agreement, installation of meter and successful commissioning of the Renewable Energy generating system within the timelines specified by the Commission, which shall not be more than thirty days from the date of submission of the installation certificate. Formats of contract agreement and installation certificate shall be placed on web-portal of the Distribution Licensee.

8.13 Consumer shall have the option of purchasing the requisite meter himself, which shall be tested and installed by the Distribution Licensee.

8.14 The Eligible Consumer shall install the Renewable Energy generating system within one hundred and eighty (180) days of receiving the LoA, as per the Standards/Codes specified under these Regulations or such extended period as may be agreed to by the Distribution Licensee:

Provided that, if the Eligible Consumer fails to set up the installation within the above stated period, then the approval shall be deemed to be cancelled, and the Eligible Consumer shall have to apply afresh.

9 Connection Agreement

9.1 The Distribution Licensee and Eligible Consumer shall enter into a Connection Agreement for Net Billing arrangement or Net Metering arrangement, after approval of connectivity of Renewable Energy generating system with the distribution network, but before the start of actual generation from the System.

9.2 A model Net Billing Connection Agreement and Net Metering Connection Agreement is provided at **Annexure - IV-A and Annexure - IV-B**, which the Distribution Licensee may modify suitably, subject to consistency with these Regulations.

9.3 The Distribution Licensee shall make available the Agreement formats on its website, along with the applicable procedure and Application and other relevant forms, within two months of notification of these Regulations.

9.4 The Connection Agreement shall remain in force for twenty-five (25) years:

Provided that, the Connection Agreement entered under Net Metering arrangement prior to notification of these Regulations shall be valid for the period as stipulated in the said Connection Agreement:

Provided further that, for the Connection Agreement entered under Net Metering arrangement prior to notification of these Regulations, where the validity of the period is not provided in the Connection Agreement, the Net Metering arrangement shall be valid for twenty-five (25) years from the date of entering into the Connection Agreement:

Provided also that, the Agreement may be terminated at any time by mutual consent.

9.5 The Eligible Consumer shall, upon termination of the Agreement, disconnect forthwith its Renewable Energy generating system from the Distribution Licensee's Network.

10 Interconnection with the Grid: Standards and Safety

10.1 The Renewable Energy generating system and allied equipment will conform to the standards and requirements specified in these Regulations and in the following Regulations and codes, as amended from time to time:

(a) Central Electricity Authority (Technical Standards for connectivity of the Distributed Generating Resources) Regulations, 2013;

(b) Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006;

(c) Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010;

(d) RERC (Electricity Supply Code and Connected Matters) Regulations, 2021.

10.2 The consumer shall get the equipment installed at his/her premises by the representative of the supplier to confirm satisfactory working:

Provided that, the equipment of Renewable Energy generating system shall be pre-tested by the supplier and a test certificate for the concerned equipment shall be provided to the consumer:

Provided further that, the tests as per applicable standards shall be done to ensure the quality of power generated from the Renewable Energy generating system.

10.3 The connectivity levels at which the Renewable Energy generating system shall be connected with the grid shall be as per RERC (Electricity Supply Code and Connected Matters) Regulations, 2021, as amended from time to time, subject to Regulation 7.

10.4 The consumer, who installs Renewable Energy generating system, shall be responsible for the safe operation, maintenance and rectification of defect of its system up to the Interconnection Point beyond which, the responsibility of safe operation, maintenance and rectification of any defect in the system including metering arrangement shall rest with the Distribution Licensee:

Provided that, the Distribution Licensee may call upon the Renewable Energy generating system to rectify the defect within a reasonable time.

10.5 The Eligible Consumer shall be solely responsible for any incident (fatal/non-fatal/departmental/non-departmental) that may occur due to back feeding from the Renewable Energy generating system when the grid supply is off:

Provided that, the Distribution Licensee reserves the right to disconnect the consumer's installation at any time in the event of such exigencies to prevent incident or damage to man and material.

10.6 The Eligible Consumer may install Renewable Energy generating system with or without storage:

Provided that, any alternate source of supply shall be restricted to the consumer's

network and the consumer shall be responsible to take adequate safety measures to prevent battery power/diesel generator power/ backup power extending to Distribution Licensee's LT grid on failure of Distribution Licensee's grid supply.

10.7 The Distribution Licensee shall have the right to disconnect the Renewable Energy generating system from its system at any time in the following conditions:

(a) Emergencies or maintenance requirement on the Distribution Licensee's electric system;

(b) Hazardous condition existing on the Distribution Licensee's system due to operation of Renewable Energy generating system or protective equipment as determined by the Distribution Licensee/Transmission Licensee/SLDC;

(c) Adverse electrical effects, such as power quality problems, on the electrical equipment of the other consumers of the Distribution Licensee caused by Renewable Energy generation as determined by the Distribution Licensee.

10.8 The tests as per EN 50160 and as per Distribution Licensee's standards shall be done to ensure the quality of power generated from the Renewable Energy generating system.

10.9 The Renewable Energy generating system should be capable of detecting an unintended islanding condition. These systems should have anti-islanding protection to prevent any unfavourable conditions including failure of supply.IEC- 62116 technical standards shall be followed to test islanding prevention measure for grid connected inverters.

10.10 Every Renewable Energy generating system shall be equipped with automatic synchronization device:

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

10.11 After considering the maintenance and safety procedures, the Distribution Licensee may require a Renewable Energy generating system to provide a manually operated isolating switch between the Renewable Energy generating system and the electricity system, which shall meet following requirements:

(a) Allow visible verification that separation has been accomplished;

(b) Include indications to clearly show open and closed positions;

(c) Be capable of being reached quickly and conveniently twenty-four hours a day by Licensee's personnel without requiring clearance from the applicant;

(d) Be capable of being locked in the open position; and

(e) May neither be rated for load break nor may have feature of over-current protection.

10.12 Prior to synchronization of the Renewable Energy generating system for the first time with the electricity system, the applicant and the Licensee shall agree on the protection

features and control diagrams.

10.13 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 technical standards, power quality standards and inverter standards shall be as per **Annexure – VI** of these Regulations or any other standards as may be specified by CEA from time to time.

10.14 **Renewable Energy generating system connected behind the Consumer's Meter**

10.14.1 Renewable Energy generating system connected behind the Consumer's meter, operating in parallel with the Distribution Licensee's Grid, and not opting either for Net Billing arrangement or Net Metering arrangement, shall be allowed only after prior intimation to the respective Distribution Licensee:

Provided that, the Consumer shall be responsible for ensuring that all necessary safeguarding measures as specified by CEA are taken:

Provided further that, in case the Consumer installs Renewable Energy generating system behind the Consumer's meter without prior intimation to the respective Distribution Licensee, then the additional liabilities shall be levied at the rate of fixed charges for the period of installation of such system till it comes to notice of Distribution Licensee that such system is installed by the Consumer applicable as per the Tariff Order of Distribution Licensees for the relevant consumer category.

10.14.2 The maximum permissible capacity of an eligible individual Renewable Energy generating system installed behind Consumer's meter shall be limited to 100% of Contract Demand as specified in these Regulations.

10.14.3 The maximum permissible energy that can be consumed from Renewable Energy generating system installed behind Consumer's meter shall be limited to the energy corresponding to the minimum Capacity Utilisation Factor/Plant Load Factor in percent as applicable for respective technology as specified in the Rajasthan Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 plus 5 percent.

10.14.4 The Consumer shall ensure that no energy is injected into the grid from such Renewable Energy generating system installed behind the Consumer's meter:

Provided that, any quantum of energy injected by such Renewable Energy generating system connected behind the Consumer's meter shall be considered as inadvertent injection and shall neither be paid for nor settled by the Distribution Licensee:

Provided further that, any quantum of energy injected by such Renewable Energy Generating System connected behind the Consumer's meter shall be considered as inadvertent injection and penalty shall be levied on such inadvertent injection as per the applicable relevant Regulations in force.

10.14.5 Apart from Parallel Operation Charges, the Commission may also determine additional Parallel Operation Charges in the form of Fixed Charges or Demand Charges

and any other Charges for such systems installed behind the consumer's meter, in the retail Tariff Order, if the Distribution Licensee proposes such additional Fixed Charges or Demand Charges and any other Charges for such systems, in its retail supply Tariff Petition, supported by adequate justification.

10.14.6 The Consumers, who have connected Solar Rooftop PV systems behind the Consumer's meter and not opted for Net Metering arrangement under RERC (Connectivity and Net Metering for Rooftop and Small Solar Grid Interactive Systems) Regulations, 2015 and subsequent amendments thereof, shall intimate the Distribution Licensee such details in Model Form within three (3) months from the notification of these Regulations:

Provided that, if consumer fails to intimate the details of Solar Rooftop PV system behind the Consumer's meter to the Distribution Licensee within the specified time, the additional liabilities may be levied at the rate of fixed charges, applicable as per the tariff order of Distribution Licensees for the relevant consumer category for such period of delay:

Provided further that, the additional liabilities shall be levied after three (3) months from the notification of these Regulations on monthly basis, as per the tariff order of Distribution Licensees for the relevant consumer category.

10.14.7 The Distribution Licensee may inspect and verify the installation of Renewable Energy generating system behind the Consumer's meter as and when required, in accordance with the provisions of the Act and Regulations made thereunder.

10.14.8 The Model Form, for intimating installation of Renewable Energy generating system behind the meter by the Eligible Consumer to the concerned Licensee, is set out at **Annexure-V** of these Regulations.

11 Metering arrangement

11.1 All meters installed at the Renewable Energy generating system shall comply with the CEA (Installation and Operation of Meters) Regulations, 2006 and subsequent amendments thereof.

11.2 All meters shall have Advanced Metering Infrastructure (AMI) facility with RS 485 (or higher) communication port or any other advance communication facility.

11.3 Under Net Billing arrangement, the Renewable Energy generating system shall be connected on Distribution Licensee side of the consumer meter.

11.4 The Net Metering arrangement shall include a single-phase or a three-phase Net Meter, as may be required, located at the point of inter-connection as ascertained by the Distribution Licensee:

Provided that, the Renewable Energy generating system under Net Metering arrangement shall be connected on consumer side of the consumer meter.

11.5 The Eligible Consumer shall install, at his own cost, a RE Generation Meter conforming to the applicable CEA Regulations at the Interconnection Point of Renewable Energy

generating system, to measure the energy generated from such system.

11.6 The Distribution Licensee shall be responsible for the testing, installation, and maintenance of the metering equipment, and its adherence to the applicable standards and specifications:

Provided that, the Consumer shall bear the costs associated with the testing, installation, and maintenance of the metering equipment.

11.7 The meters shall be installed as would enable easy access to the Distribution Licensee for meter reading.

11.8 The meters installed shall be jointly inspected and sealed on behalf of both the Parties and shall be tested or checked only in the presence of the representatives of the consumer and Distribution Licensee or as per the Supply Code specified by the Commission:

Provided that, the Eligible Consumer shall follow the metering specifications and provisions for placement of meter as developed by the Distribution Licensee from time to time and as per the Supply Code.

11.9 The meter readings taken by the Distribution Licensee shall form the basis of billing and commercial settlement.

11.10 A consumer, at his own cost, shall also install a Check Meter of appropriate class for the RE Generation Meter:

Provided that, such Check meter shall be used for billing and commercial settlement, in the absence of readings from RE Generation meter on account of defective/failure/burnt condition.

11.11 In case of defective/failure/burnt condition of any meter, the Consumer shall report the failure to the Distribution Licensee in the specified format of Distribution Licensee:

Provided that, the Distribution Licensee shall replace the meter as specified in the Supply Code, as amended from time to time.

12 Energy Accounting and Settlement

12.1 The accounting of electricity exported and imported by the Eligible Consumer shall become effective from the date of connectivity of the Renewable Energy generating system with the distribution network.

12.2 The Distribution Licensee shall undertake meter reading of both, RE Generation Meter and the Consumer Meter or Net Meter, as applicable, for all Eligible Consumers, according to the regular metering cycle.

12.3 Meter readings shall be taken monthly or as per the billing cycle specified under the applicable Supply Code:

Provided that, in case of defective/failure/burnt condition of the meter, the electricity

generated by Renewable Energy generating system during the period in which the meter is defective, shall be taken from the Check meter:

Provided further that, in case meter readings are not available from the Check meter, the electricity generated by Renewable Energy generating system during the period in which RE Generation Meter as well as Check Meter are defective, shall be as per provisions specified in Electricity Supply Code.

12.4 For each billing period, the Licensee shall show separately the following information on its bill to the Eligible Consumer:

a) Quantum of Energy generation recorded in the RE Generation Meter, including opening and closing balance;
b) Quantum of electricity units consumed by the Consumer in the billing period, including opening and closing balance;
c) Amount of billing credit, if any, in the billing period, including opening and closing balance;
d) The generation units used by the Distribution Licensee for RPO compliance.

12.5 **Net Billing Arrangement**

12.5.1 Net Billing is the arrangement, where the Renewable Energy generating system is:

(a) Installed to serve a specific consumer;
(b) Connected on the Distribution Licensee side of the consumer meter;
(c) Selling entire power generated to the Distribution Licensee under the Connection Agreement at the tariff agreed in the Connection Agreement with the Distribution Licensee, and the amount payable by the Distribution Licensee is reduced from the amount payable by the consumer for electricity supplied by the Distribution Licensee.

12.5.2 The Distribution Licensee shall enter into Connection Agreement at the weighted average tariff discovered through Competitive Bidding for respective technology in previous Financial Year and adopted by the Commission, plus an incentive of 25%. In case no bidding is done in previous Financial Year, then the latest tariff discovered through competitive bidding plus an incentive of 25% shall be applicable:

Provided that, in case no bidding is done for respective technology, the latest weighted average tariff of large-scale solar projects of 5 MW and more, discovered through Competitive Bidding and adopted by the Commission, plus an incentive of 25% shall be applicable:

Provided further that, the above Tariff shall be applicable for the entire duration of the Agreement.

12.5.3 The Distribution Licensee shall raise bill on the Consumer in accordance with the following equation:

Energy Bill of consumer = Fixed Charges + other applicable charges and levies + (EDL x TRST) - (ERE * TPPA) – Billing Credit;

Where:

(a) Fixed Charges means the Fixed/Demand Charges as applicable to the consumer category as per the applicable retail supply Tariff Order;

(b) Other charges and levies mean any other charges such as duties and taxes, cess, etc.;

(c) EDL means the energy units supplied (i.e., Gross Electricity Consumption by the Consumer) by the Distribution Licensee as recorded by the consumer meter for the billing period;

(d) TRST means the applicable retail supply tariff of the concerned consumer category as per the applicable retail supply Tariff Order of the Commission;

(e) ERE means the energy units recorded for the billing period by the RE Generation Meter;

(f) TPPA means the Tariff as per the Connection Agreement signed between the Consumer and Distribution Licensee, in accordance with Regulation 12.5.2;

(g) Billing Credit is the cumulative opening credit for a month, if any.

12.5.4 If the value of Renewable Energy generation in a month is more than the value of all other components of consumer bill, then the billing credit shall be provided by Distribution Licensee in the electricity bill for such month:

Provided that, such billing credit shall be carried forward to next month and shall be adjusted as specified in Regulation 12.5.3:

Provided further that, the billing credit at the end of Settlement Period shall be paid by the Distribution Licensee to Eligible Consumer latest by the fifteenth of May of the next Financial Year.

12.5.5 When an Eligible Consumer leaves the system, the available billing credit shall lapse, and no payments shall be made.

12.5.6 The maximum permissible energy that can be generated from Renewable Energy generating system installed under the Net Billing Arrangement shall be limited to the energy corresponding to the minimum Capacity Utilisation Factor/Plant Load Factor in percent as applicable for respective technology as specified in the Rajasthan Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 plus 5 percent.

12.5.7 For consumers covered under specific Central and/or State Government Schemes, such as PM KUSUM, quantum of energy and rate of purchase by Distribution Licensees shall be as per Order issued by the Commission in this regard.

Annexure-IV

12.6 **Net Metering Arrangement**

12.6.1 The energy accounting and settlement under Net Metering arrangement shall be as under:

a) If the quantum of electricity exported by a domestic category consumer exceeds the quantum imported during the Billing Period, the excess quantum exported by such domestic consumer shall be purchased by the Distribution Licensee at the weighted average tariff of large-scale solar projects of 5 MW and more, discovered through Competitive Bidding in last Financial Year, and adopted by the Commission. In case no bidding is done in previous Financial Year, then the latest tariff discovered through competitive bidding shall be applicable. The total amount arrived for excess energy injected by such consumer shall be adjusted in the form of credit equivalent to such amount payable in the immediately succeeding billing cycle:

Provided that, even in case of Domestic consumers having existing Net Metering installations governed as per the Rajasthan Electricity Regulatory Commission (Connectivity and Net Metering for Rooftop and Small Solar Grid Interactive Systems) Regulations, 2015 and subsequent amendments thereof, the excess quantum exported shall be purchased by the Distribution Licensee at the weighted average tariff of large scale solar projects of 5 MW and more, discovered through Competitive Bidding in last Financial Year, and adopted by the Commission. In case no bidding is done in previous Financial Year, then the latest tariff discovered through competitive bidding shall be applicable. The total amount arrived for excess energy injected shall be adjusted in the form of credit equivalent to such amount payable in the immediately succeeding billing cycle:

Provided further that, in case of consumers other than domestic category, including those having existing Net Metering installations governed as per the Rajasthan Electricity Regulatory Commission (Connectivity and Net Metering for Rooftop and Small Solar Grid Interactive Systems) Regulations, 2015 and subsequent amendments thereof, the net surplus electricity remaining available at the end of billing period of the respective category shall lapse and no payment shall be made for the same:

Provided also that, for consumers covered under specific Central and/or State Government Schemes, such as PM KUSUM, quantum of energy and rate of purchase by Distribution Licensees shall be as per Order issued by the Commission in this regard.

b) If the quantum of electricity Units imported by the Eligible Consumer during any Billing Period exceeds the quantum exported, the Distribution Licensee shall raise its bill for the net electricity consumption after adjusting the credited Units:

Provided that, for Net Metered consumers the Net imported energy (Total Consumption from all sources – Allowable Solar Generation) from the grid shall be billed according to the highest slab corresponding to the total consumption from all sources.

Provided further that even for the Consumers covered under the existing Net Metering installations governed as per the Rajasthan Electricity Regulatory Commission (Connectivity and Net Metering for Rooftop and Small Solar Grid Interactive Systems) Regulations, 2015 and subsequent amendments thereof, the energy billing shall also be governed by the above proviso.

c) The unadjusted net credited Units of electricity as at the end of each financial year for the domestic category consumer shall be purchased by the Distribution Licensee at the same rate as mentioned in 12.6.1 (a) and will be credited in the account of the consumer within the first month of the following year.

d) The maximum permissible energy that can be consumed from Renewable Energy generating system installed under the Net Metering Arrangement shall be limited to the energy corresponding to the minimum Capacity Utilisation Factor/Plant Load Factor in percent as applicable for respective technology as specified in the Rajasthan Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 plus 5 percent.

12.7 In case of any dispute in billing, it would be settled by the Consumer Grievance Redressal Forum and if issue still remains unresolved, the consumer may approach the Ombudsman.

13 Reporting requirements

13.1 The Distribution Licensee shall report the following, by May 1st of each year and shall also place on its website:

(a) Total number of Eligible Consumers having interconnected Renewable Energy generating system at the end of the previous financial year;

(b) Total kW capacity of the Eligible Consumers interconnected at the end of previous financial year;

(c) Total kWh received by the Eligible Consumer from the Distribution Licensee by month and by year for the previous financial year;

(d) Total kWh of Renewable Energy generated by the Eligible Consumer by month and by year for the previous financial year;

(e) Total kWh delivered by the Eligible Consumer to the Distribution Licensee as per LT cycle and by year for the previous financial year;

(f) For each Eligible Consumer interconnection:
1) Renewable Energy technology utilized;
2) Gross power rating;
3) Geographic location; and
4) Date interconnected.

Annexure-IV

14 Renewable Purchase Obligation

14.1 The quantum of electricity generated from the Renewable Energy generating system under Net Billing arrangement or Net Metering arrangement by an Eligible Consumer, shall qualify towards compliance of Renewable Purchase Obligation (RPO) for the Distribution Licensee in whose area of supply, the Eligible Consumer is located:

Provided that, such quantum of electricity generated shall qualify towards compliance of Renewable Purchase Obligation under Net Metering arrangement only if an Eligible Consumer is not defined as obligated entity.

15 Applicability of other charges

15.1 The quantum of electricity generated from the self-owned Renewable Energy generating system under Net Metering arrangement, if installed on Eligible Consumer premises, shall be exempted from banking charges, wheeling charges, cross subsidy surcharge, and additional surcharge.

15.2 The quantum of electricity generated from the RESCO-owned Renewable Energy generating system under Net Metering arrangement, if installed on Eligible Consumer premises, shall be exempted from banking charges and wheeling charges:

Provided that, cross subsidy surcharge and additional surcharge shall be applicable for such RESCO-owned Renewable Energy generating system under Net Metering arrangement, except in case of LT domestic category consumers, at the rate of 50% of cross subsidy surcharge and additional surcharge applicable for open access consumers.

Provided further that in case of consumer categories for which cross subsidy surcharge and additional surcharge has not been determined by the Commission, surcharge (cross subsidy plus additional surcharge), shall be applicable @ Rs 1.25/kWh for such category of consumers, till the same is revised by the Commission through a separate order.

15.3 The quantum of electricity generated from the self-owned or the RESCO-owned Renewable Energy generating system under the Net Billing arrangement, if installed on Eligible consumer premises, shall be exempted from banking charges, wheeling charges, cross subsidy surcharge and additional surcharge.

16 Sharing of CDM Benefits

16.1 The CDM benefits arising from solar energy generation from Renewable Energy generating system shall be retained by Distribution Licensee:

Provided that, the entire CDM benefits obtained by the Distribution Licensee shall be fully passed on to the consumers through the ARR.

17 Parallel Operation Charges

17.1 The Commission may stipulate from time to time the 'Parallel Operation Charges' to be

levied on the energy generated under Net Metering systems, which shall cover balancing, banking and wheeling cost after adjusting RPO benefits, avoided distribution losses and any other benefits accruing to the Distribution Licensee, based on the Petition filed by Distribution Licensee, supported by adequate justification:

Provided that, no Parallel Operation Charges shall be levied on Net Billing consumers:

Provided further that, Parallel Operation Charges on the Renewable Energy generating system connected behind the Consumer's meter shall be also applicable apart from charges in accordance with Regulation 10.14.5.

18 Penalty

18.1 In case of failure to meet the requirements under these Regulations, the Renewable Energy generating system or the Distribution Licensee, as the case may be, shall be liable to pay penalty as decided by the Commission from time to time.

19 Power to give directions

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

20 Power to amend

20.1 The Commission may, at any time, vary, alter, modify or amend any provisions of these Regulations.

21 Power to Relax

21.1 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 suo-motu or on an application made before it by an interested person.

22 Power to remove difficulties

22.1 If any difficulty arises in giving effect to the provisions of these Regulations, the Commission may either suo-motu or on a Petition, by general or specific order, make such provisions not inconsistent with the provisions of the Act as may appear to be necessary for removing the difficulty.

By order of the Commission

(Secretary)

Annexure-IV

Annexure - I

LIST OF ABBREVIATIONS

BIS	Bureau of Indian Standards
CEA	Central Electricity Authority
CT	Current Transformer
DC	Direct Current
Discom	Jaipur Vidyut Vitran Nigam Limited, Ajmer Vidyut Vitran Nigam Limited, Jodhpur Vidyut Vitran Nigam Limited
EHT	Extra High Tension
HT	High Tension
IEC	International Electro-technical Commission
IEEE	Institution of Electrical and Electronics Engineers
kV	kilo Volt
kVA	kilo Volt Ampere
kW	kilo Watt
kWh	kilo-Watt Hour
LT	Low Tension
PCU	Power Conditioning Unit
RE	Renewable Energy
REC	Renewable Energy Certificate
RERC or Commission	Rajasthan Electricity Regulatory Commission
RPO	Renewable Purchase Obligation
SLDC	State Load Despatch Centre
SM	Solar Meter
SPV	Solar Photo Voltaic

Annexure - II

Model Format for Application for Renewable Energy Generating System Connectivity under Net Billing Arrangement or Net Metering Arrangement

Name of the Distribution Licensee [_____]

Name of the Administrative Office [_____]

Application No. _____

Date of Receipt _____

1	Name of applicant	
2	Address of applicant	
3	Service connection number	
4	Service connection tariff	
5	Telephone number(s)	

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6	Email ID	
7	Renewable Energy generating system capacity (kilo Watts)	
8	Renewable Energy generating system grid inverter make and type	
9	Renewable Energy generating system grid inverter has automatic isolation protection (Y/N)?	
10	Has a Renewable Energy generating system Meter been installed (Y/N)?	
11	Expected date of commissioning of Renewable Energy system.	
12	Details of test certificates of Renewable Energy generating system/inverter for standards required under the Regulations	

Signature of the Applicant:

Date:

List of documents attached with Application Form (To be uploaded – No physical copies)

1. Copy of the latest paid electricity bill.
2. General Power of Attorney in favour of signatory in case of Partnership Firms; certified true copy of the Resolution, authorizing the signatory to deal with the concerned Distribution Licensee, passed by the Board of Directors in case of Companies (as applicable).
3. Technical details of Renewable Energy generating system, Inverter and other equipment of System proposed to be installed.
4. Proof of payment of Registration Fee.

Acknowledgement (Web Enabled System Generated Receipt)

Received an Application from …….. for a Renewable Energy Net Billing or Net Metering connection/installation of Renewable Energy generating system of capacity of……. kW as per details below:

Name:
Date:
Service Connection number:
Application registration no.:
Renewable Energy generating system Capacity:

Name of Officer:
Signature:
Designation/ (Name of Discom)

Annexure-IV

Annexure - III

Schedule

(Vide Regulation 8.3)

S. No.	Description	Amount
1.	Application Fee	
	i. LT Single Phase	Rs. 200 /-
	ii. LT Three Phase	Rs. 500 /-
	ii. HT – 11 kV	Rs. 1,000 /-
	iv. HT – 33 kV	Rs. 2,000 /-
	v. EHT-132 kV and above	Rs. 5,000 /-
2.	Security Deposit for Renewable Energy plant	
	(a) Domestic	Rs. 100/kW
	(b) Non-Domestic and others	Rs. 200/kW

The amount of security for RESCO owned system shall be double of the amount as mentioned above.

The security deposit shall not bear any interest.

Annexure – IV-A

Model Net Billing Connection Agreement

This Agreement is made and entered into at (location) ____ on this (date) _____ day of (month) _____ year _____ between

The Eligible Consumer, by the name of ---------- having premises at (address) _____ _____ as first party

AND

Distribution Licensee (herein after called as Discom) and represented by ---------- (designation of office) and having its registered office at (address) _____ as second party of the agreement

And whereas, the Discom agrees to provide grid connectivity to the Eligible Consumer for injection of the electricity generated from his Renewable Energy generating system of capacity ___ kilowatts into the power system of Discom and as per conditions of this agreement and RERC (Grid Interactive Distributed Renewable Energy generating system) Regulations, 2021 notified by the Rajasthan Electricity Regulatory Commission.

Both the parties hereby agree to as follows:

1 Eligibility

1.1 Eligibility for Net Billing has been specified in the above said regulations of the Rajasthan Electricity Regulatory Commission. Eligible Consumer has to meet the standards and conditions for being integrated into grid/distribution system.

2 Technical and Interconnection Requirements

2.1 The Eligible Consumer agrees that his Renewable Energy generating system and Net Billing system will conform to the standards and requirements specified in RERC (Grid Interactive Distributed Renewable Energy generating system) Regulations, 2021 and in the following Regulations and codes as amended from time to time:

a) CEA's (Technical Standards for connectivity of the Distributed Generating Resources) Regulations, 2013;

b) Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006;

c) Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010;

d) RERC Supply Code Regulations, 2021;

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

2.3 Eligible Consumer agrees that in case of a power outage on Discom's system, the Renewable Energy generating system will disconnect/isolate automatically and his plant will not inject power into Licensee's distribution system.

2.4 All the equipment connected to distribution system shall be compliant with relevant International (IEEE/IEC) or Indian standards (BIS) and installations of electrical equipment must comply with Central Electricity Authority (Measures of Safety and Electricity Supply) Regulations, 2010 as amended from time to time.

2.5 Eligible Consumer agrees that the Licensee will specify the interface/Interconnection Point and metering point.

2.6 Eligible Consumer and Licensee agree to comply with the relevant CEA and

RERC Regulations and directions as amended from time to time, in respect of metering, operation and maintenance of the plant, drawing and diagrams, site responsibility schedule, harmonics, synchronization, voltage, frequency, flicker, etc.

2.7 Due to Discom's obligation to maintain a safe and reliable distribution system, Eligible Consumer agrees that if it is determined by the Discom that Eligible Consumer's Renewable Energy generating system either causes damage to and/or produces adverse effects affecting other consumers or Discom's assets, Eligible Consumer will have to disconnect Renewable Energy generating system immediately from the distribution system upon direction from the Discom and correct the problem at his own expense prior to a reconnection.

2.8 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 Renewable Energy generating system when the grid supply is off. The Distribution Licensee reserves the right to disconnect the consumer's installation at any time in the event of such exigencies to prevent accident or damage to man and material.

3 Clearances and Approvals

3.1 The Eligible Consumer shall obtain all the necessary approvals and clearances (environmental and grid connection related) before connecting the Renewable Energy generating system to the distribution system.

4 Access and Disconnection

4.1 Discom shall have access to metering equipment and disconnecting means of the Renewable Energy generating system both automatic and manual, at all times.

4.2 In emergency or outage situation, where there is no access to the disconnecting means, both automatic and manual, such as a switch or breaker, Discom may disconnect service to the premises of the Eligible Consumer.

5 Liabilities

5.1 Eligible Consumer and Discom shall indemnify each other for damages or adverse effects from either party's negligence or intentional misconduct in the connection and operation of Renewable Energy system or Discom's distribution system.

5.2 Discom and Eligible Consumer shall 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,

Annexure-IV

including, but not limited to, punitive or exemplary damages, whether any of the said liability, loss or damages arise in contract, or otherwise.

5.3 Discom shall not be liable for delivery or realization by Eligible Consumer for any fiscal or other incentive provided by the Central/State Government beyond the scope specified by the Commission in its relevant Order.

5.4 The Discom may consider the quantum of electricity generation from Renewable Energy Generating System under Net Billing arrangement towards RPO.

5.5 The proceeds from CDM benefits shall be retained by the Discom.

6 Commercial Settlement

6.1 All the commercial settlements under this agreement shall follow the RERC (Grid Interactive Distributed Renewable Energy generating system) Regulations, 2021 as amended from time to time.

7 Connection Costs

7.1 The Eligible Consumer shall bear all costs related to setting up of Renewable Energy generating system including metering and interconnection costs. The Eligible Consumer agrees to pay the actual cost of modifications and upgrades to the service line required to connect Renewable Energy system to the grid in case it is required.

8 Termination

8.1 The Agreement may be terminated at any time by mutual consent.

8.2 Eligible Consumer shall upon termination of this Agreement, disconnect the Renewable Energy system from Discom's distribution system in a timely manner and to Discom's satisfaction.

In witness, whereof, Mr./Mrs. ---------- for and on behalf of --- -------- (Eligible Consumer) and Mr./Mrs. ---------- for and on behalf of---------- (Discom) sign this agreement in two originals.

Eligible Consumer	**Distribution Licensee**
Name	Name
Address	Designation
Service connection No.	Office Address

Annexure – IV-B

Model Net Metering Connection Agreement

This Agreement is made and entered into at (location) ____ on this (date) _____ day of (month) _____ year _____ between

The Eligible Consumer, by the name of ---------- having premises at (address) _____ _____ as first party

AND

Distribution Licensee (herein after called as Discom) and represented by ---------- (designation of office) and having its registered office at (address) _____ as second party of the agreement

And whereas, the Discom agrees to provide grid connectivity to the Eligible Consumer for injection of the electricity generated from his Renewable Energy generating system of capacity ___ kilowatts into the power system of Discom and as per conditions of this agreement and RERC (Grid Interactive Distributed Renewable Energy generating system) Regulations, 2021 notified by the Rajasthan Electricity Regulatory Commission.

Both the parties hereby agree to as follows:

1 Eligibility

1.1 Eligibility for Net Metering has been specified in the above said regulations of the Rajasthan Electricity Regulatory Commission. Eligible Consumer has to meet the standards and conditions for being integrated into grid/distribution system.

2 Technical and Interconnection Requirements

2.1 The Eligible Consumer agrees that his Renewable Energy generating system and net metering system will conform to the standards and requirements specified in RERC (Grid Interactive Distributed Renewable Energy generating system) Regulations, 2021 and in the following Regulations and codes as amended from time to time:

a) CEA's (Technical Standards for connectivity of the Distributed Generating Resources) Regulations, 2013;

b) Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006;

c) Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010;

d) RERC Supply Code Regulations, 2021;

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

2.3 Eligible Consumer agrees that in case of a power outage on Discom's system, the Renewable Energy generating system will disconnect/isolate automatically and his plant will not inject power into Licensee's distribution system.

2.4 All the equipment connected to distribution system shall be compliant with relevant International (IEEE/IEC) or Indian standards (BIS) and installations of electrical equipment must comply with Central Electricity Authority (Measures of Safety and Electricity Supply) Regulations, 2010 as amended from time to time.

2.5 Eligible Consumer agrees that the Licensee will specify the interface/Interconnection Point and metering point.

2.6 Eligible Consumer and Licensee agree to comply with the relevant CEA and RERC Regulations and directions as amended from time to time, in respect of metering, operation and maintenance of the plant, drawing and diagrams, site responsibility schedule, harmonics, synchronization, voltage, frequency, flicker, etc.

2.7 Due to Discom's obligation to maintain a safe and reliable distribution system, Eligible Consumer agrees that if it is determined by the Discom that Eligible Consumer's Renewable Energy generating system either causes damage to and/or produces adverse effects affecting other consumers or Discom's assets, Eligible Consumer will have to disconnect Renewable Energy generating system immediately from the distribution system upon direction from the Discom and correct the problem at his own expense prior to a reconnection.

2.8 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 Renewable Energy generating system when the grid supply is off. The Distribution Licensee reserves the right to disconnect the consumer's installation at any time in the event of such exigencies to prevent accident or damage to man and material.

3 Clearances and Approvals

3.1 The Eligible Consumer shall obtain all the necessary approvals and clearances (environmental and grid connection related) before connecting the Renewable Energy generating system to the distribution system.

Annexure-IV

4 Access and Disconnection

4.1 Discom shall have access to metering equipment and disconnecting means of the Renewable Energy generating system both automatic and manual, at all times.

4.2 In emergency or outage situation, where there is no access to the disconnecting means, both automatic and manual, such as a switch or breaker, Discom may disconnect service to the premises of the Eligible Consumer.

5 Liabilities

5.1 Eligible Consumer and Discom shall indemnify each other for damages or adverse effects from either party's negligence or intentional misconduct in the connection and operation of Renewable Energy system or Discom's distribution system.

5.2 Discom and Eligible Consumer shall 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.

5.3 Discom shall not be liable for delivery or realization by Eligible Consumer for any fiscal or other incentive provided by the Central/State Government beyond the scope specified by the Commission in its relevant Order.

5.4 The Discom may consider the quantum of electricity generation from Renewable Energy Generating System under net metering arrangement towards RPO (Applicable only in case of Eligible Consumer who is not defined as an obligated entity).

5.5 The proceeds from CDM benefits shall be retained by the Discom.

6 Commercial Settlement

6.1 All the commercial settlements under this agreement shall follow the RERC (Grid Interactive Distributed Renewable Energy generating system) Regulations, 2021 as amended from time to time.

7 Connection Costs

7.1 The Eligible Consumer shall bear all costs related to setting up of Renewable Energy generating system including metering and interconnection costs. The Eligible Consumer agrees to pay the actual cost of modifications and upgrades to the service line required to connect Renewable Energy system to the grid in case it is required.

Annexure-IV

8 Termination

8.1 The Agreement may be terminated at any time by mutual consent.

8.2 Eligible Consumer shall upon termination of this Agreement, disconnect the Renewable Energy system from Discom's distribution system in a timely manner and to Discom's satisfaction.

In witness, whereof, Mr./Mrs. ---------- for and on behalf of --- -------- (Eligible Consumer) and Mr./Mrs. ---------- for and on behalf of---------- (Discom) sign this agreement in two originals.

Eligible Consumer	**Distribution Licensee**
Name	Name
Address	Designation
Service connection No.	Office Address

Annexure - V

Prior Intimation for Installation of Renewable Energy Generating System behind the Consumer's Meter

Date ……
Place……..

[To be addressed to concerned Authority of Distribution Licensee]
To,
……..
……..
……..

Subject: Prior Intimation for Installation of Renewable Energy Generating system facility behind the meter

Sir/Madam,

I undersigned …… [Name of consumer]……, having Consumer Account No. ……., is giving the prior intimation, as per RERC (Grid Interactive Distributed Renewable Energy generating systems) Regulations, 2021 for installation of Renewable Energy system to be connected behind my meter having Meter No. …….

I hereby submit the following details:

(a) Consumer Account No. : ……..
(b) Consumer Category : ……..
(c) Connected Load (kW)/ Contract Demand (kVA) : ……..

Annexure-IV

(d) Capacity of Renewable Energy generating system : ……..
(e) Interconnection point :……..
(f) Whether the load is separated for Renewable Energy generating system : Yes/No
(g) Whether the Renewable Energy generating system is to be connected in parallel to Distribution system: Yes/No

Yours faithfully,

(Signature)
Name: ……..
Address: ……..
Contact No. : ……..

Annexure - VI

Inverter Standards

Inverter should comply with IEC 61683/IS 61683 for efficiency and Measurements and should comply with IEC 60068-2 (1, 2,14,30) / Equivalent BIS Standard for environmental testing.

Inverter should supervise the grid condition continuously and in the event of grid failure (or) under voltage (or) over voltage, Renewable Energy System should be disconnected by the circuit Breaker / Auto switch provided in the inverter and shall comply with requirements specified at regulation10 of these Regulations.

Harmonics Standards
As per the standard IEEE 519, the permissible individual harmonics level shall be less than 3% (for both voltage and current harmonics) and Total Harmonics Distortion (THD) for both voltage and current harmonics of the system shall be less than 5%.

Technical and interconnection requirements Parameters

Parameter	Reference	Requirement
Overall conditions of service	State Distribution/Supply Code	Compliance with the terms and conditions of supply.
Overall Grid Standards	Central Electricity Authority (Grid Standard) Regulations 2010 and subsequent amendments thereof.	Compliance with Grid standards as regards the frequency, voltage and protection coordination.
Meters	Central Electricity authority (Installation & Operation of Meters) Regulations, 2006 and RERC Regulations and directions as amended from time to time.	Compliance with the specifications of the meters.
Safety and supply	Central Electricity Authority(Measures of Safety and Electricity Supply) Regulations, 2010 and subsequent amendments	Compliance with safety provisions for electrical installations and apparatus of voltage below and above 650 volts.

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Parameter	Reference	Requirement
	thereof.	
Harmonic Requirements Harmonic Current	IEEE 519 CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 and subsequent amendments thereof.	The Total Harmonic Distortion (THD) for voltage at the interconnection point should not exceed 5%. For the current distortion limits, the Total Demand Distortion (TDD) in terms of ratio of available short circuit current to the demand current (I_{sc}/I_L) should remain within limits specified for various harmonics for different TDD values.
Synchronization	CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 and subsequent amendments thereof.	Renewable Energy system must be equipped with a grid frequency synchronization device. Every time the generating station is synchronized to the electricity system, it shall not cause voltage fluctuation greater than +/- 5% at point of inter connection.
Voltage	CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations 2013 and subsequent amendments thereof.	The voltage-operating window should minimize nuisance tripping and should be within operating range of 80% to 110% of the nominal connected voltage. The Renewable Energy system must isolate itself from the grid within a clearing time of 2 seconds.
Flicker	CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations 2013 and subsequent amendments thereof.	Operation of Renewable Energy system should not cause voltage flicker in excess of the limits stated in IEC 61000 standards as follows: Short-term flicker (P_{st}): The flicker severity evaluated over a short period of time (10 minutes) should be <=1. Long-term flicker (P_{lt}): The flicker severity evaluated over a long period of time (typically 2 hours) should be <=0.65.
Frequency	CEA (Technical Standards for	There should be over and under

Annexure-IV

Parameter	Reference	Requirement
	Connectivity of the Distributed Generation Resources) Regulations, 2013 and subsequent amendments thereof.	frequency trip functions with a clearing time of 0.2 seconds, when the Distribution system frequency deviates outside the specified conditions (50.5 Hz on upper side and 47.5 Hz on lower side).
DC injection	CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 and subsequent amendments thereof.	Renewable Energy system should not inject DC power more than 0.5% of full rated output at the interconnection point or 1% of rated inverter output current into distribution system under any operating conditions.
Power Factor	CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 and subsequent amendments thereof.	When the output of the inverter is greater than 50%, the power output from the inverter shall have a lagging power factor of greater than 0.9.
Islanding and Disconnection	CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations 2013 and subsequent amendments thereof.	The Renewable Energy system must island/disconnect itself within IEC standard stipulated time in the event of fault, voltage or frequency variations.
Overload and Overheat	CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations 2013 and subsequent amendments thereof.	The inverter should have the facility to automatically switch off in case of overload or overheating and should restart when normal conditions are restored.
Paralleling Device	CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations 2013 and subsequent amendments thereof.	Paralleling device of Renewable Energy system shall be capable of withstanding 220% of the normal voltage at the interconnection point.

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