



## MP URJA VIKAS NIGAM LTD.

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No: F/UVN/2025/RFT/RESCO-X/03-230/5185-SEONI/119

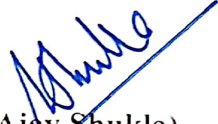
Dated :- 09/04/2025

**Sub: - RfP for “development of cumulative 983 kW of grid-connected rooftop solar pv systems to be set up at identified government premises in the district Seoni of the Madhya Pradesh – minutes of pre bid meeting- reg.**

**Ref:-** NIT Number: F/UVN/2025/RFT/RESCO-X/03-230/5185 and RFP Number: F/UVN/2025/RFT/RESCO-X/03-230/5185-SEONI dated 11.02.2025

This has reference to above referred RFP. Some major points of concerns and clarification on queries raised by potential bidders are provided in **appendix-1** to this letter. Further, the full copies of updated RfP and PPA with detailed changes are uploaded in the portal (**appendix-2** to this letter). Bidders are advised to consider only latest version of RfP and PPA read with clarifications through this minutes of pre-bid meeting. Accordingly, previous version of RfP and PPA stand set aside.

These minutes shall be treated as part of the RFP and/or PPA, as relevant and appropriate.

  
(Ajay Shukla)  
Executive Engineer  
(MPUVNL)

9. **Participation of LLP Firm/ Partnership Firm/ Sole Proprietor:** In addition to Companies registered under Companies Act 1956 or 2013 and LLCs, Partnership Firm, LLP Firm and Sole Proprietor have also been allowed to participate subject to meeting prescribed eligibility criteria.
10. **Alternate instruments for EMD:** Bidders can provide EMD in the form of bank guarantee, FDR, TDR and RTGS.
11. **Relaxation of MPUVNL fees and EMD to MSMEs:** MSMEs registered in Madhya Pradesh are eligible for exemption towards Bid Processing Fees and Bid Security/EMD.
12. **Key dates:** Except dates and stage passed by, remaining key dates mentioned in RFP stand revised as below:

S. No.	Nodal Agency Stage	Date	Time (Hrs.)
11.	Last date of registration	29.04.2025	17:00
12.	Proposal Due Date	29.04.2025	18:00
13.	Hard Copy submission of Bid Document	01.05.2025	18:00
14.	Qualification Proposal Opening	05.05.2025	14:00
15.	Financial Proposal Opening	16.05.2025	17:00

*Mudra*

**REQUEST FOR PROPOSAL**  
**FOR**  
**DEVELOPMENT OF CUMULATIVE 983 kW OF GRID-CONNECTED**  
**ROOFTOP SOLAR PV SYSTEMS TO BE SET UP AT IDENTIFIED**  
**GOVERNMENT PREMISES IN THE DISTRICT SEONI OF THE MADHYA**  
**PRADESH**

**NIT Number: F/UVN/2025/RFT/RESCO-X/03-230/5185**

**RFP Number: F/UVN/2025/RFT/RESCO-X/03-230/5185-SEONI**

**Date: 11.02.2025**

**ISSUED BY:**

**MADHYA PRADESH URJA VIKAS NIGAM LIMITED,**  
**URJA BHAWAN,**  
**LINK ROAD NO. 2, SHIVAJI NAGAR,**  
**BHOPAL – 462016,**  
**MADHYA PRADESH, INDIA.**

## **TABLE OF CONTENTS**

Disclaimer .....	3
Glossary .....	5
Section I - Introduction .....	13
1. Background.....	13
Section II – Bid Process .....	15
Part A. General.....	15
Section II - Introduction.....	15
2. Description of Bid Process .....	15
3. Eligibility of Bidders .....	16
4. Data Room and Site Visit .....	22
5. Clarifications on Bid Documents and Pre-Bid Meetings.....	23
6. Amendment of Bid Documents .....	24
Part B. BID SECURITY AND PERFORMANCE SECURITY .....	26
7. Bid Security .....	26
8. Performance Security.....	27
Part C. Preparation and Submission of Bids .....	29
9. Number of Bids .....	29
10. Cost of Bidding.....	29
11. Language of Bid and Correspondence.....	29
12. Proposal Due Date .....	29
13. Validity of Bids .....	29
14. Currencies of Bids .....	30
15. Submission of Bid .....	30
Part D. EVALUATION OF PROPOSALS.....	35
16. Determination of Responsiveness of Qualification Proposals.....	35
17. Evaluation of Qualification Proposals .....	36
18. Determination of Responsiveness of Financial Proposals .....	37
19. Evaluation of Financial Proposals .....	37
Part E. REVERSE AUCTION PROCESS.....	39
20. Reverse Auction Process .....	39
Part F. LOA and SIGNING OF PPA .....	42
21. LOA .....	42
22. Signing of PPA .....	42
Part G. MISCELLANEOUS .....	43
23. Bid Documents .....	43
24. Acknowledgement by Bidder .....	43

25. Rights of MPUVNL.....	44
26. Correspondence with Bidders.....	46
27. Confidential Information and Proprietary Data.....	46
28. Fraud and Corrupt Practices .....	46
29. Governing Law and Jurisdiction.....	48
Schedule 1 - Schedule of Bid Process.....	49
Schedule 2 - E-Bidding Portal .....	50
Annex 1 – Letter of Bid .....	59
Annex 2 – Format of Bid Security .....	65
Annex 3 – Format for Board Resolutions .....	67
Annex 4 – Format for Power of Attorney in favour of Lead Member of Consortium.....	69
Annex 5 – Format for Joint Bidding Agreement .....	72
Annex 6 – Format for Letter of Financial Capacity.....	77
Annex 7 – Format for Financial Proposal.....	81
Annex 8 – Format of Certificate as Per Office Memorandum.....	83
Annex 9 – Format of Certificate Shareholding of Bidder.....	84
Annex 10 – Format for Disclosure.....	85
Annex 11 – Unit wise Site Details of the Project.....	87

## **DISCLAIMER**

The information contained in the Bid Documents, or any other information provided to the Bidders, whether verbally or in writing or in any other form, by or on behalf of MPUVNL and its employees or advisors is provided to Bidders on the terms and conditions set out in the RFP and such other terms and conditions subject to which such information is provided.

The RFP is not an agreement and further it is neither an offer nor an invitation by MPUVNL to the Bidders or any other Person. The purpose of the Bid Documents is to provide the Bidders with information that may be useful to them in the preparation and submission of their Bids.

The Bid Documents include statements which reflect various assumptions and assessments arrived at by MPUVNL and its advisors for the Project which are to be set up, at the identified Government premises in the District Seoni of the Madhya Pradesh, by the Solar Power Developer. Such assumptions, assessments and statements do not purport to contain all the information that the Bidders may require. The information contained in the Bid Documents may not be appropriate for all Persons and it is not possible for MPUVNL, its employees or advisors to consider the investment objectives, financial situation and particular needs of each Person who reads the Bid Documents. The assumptions, assessments, statements and information contained in the Bid Documents may not be complete, accurate, adequate or correct. Each Bidder should therefore conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in the Bid Documents.

The information provided in the Bid Documents to the Bidders is on a wide range of matters, some of which may depend upon interpretation of the law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of the law. MPUVNL, its employees and advisors accept no responsibility for the accuracy or otherwise for any interpretation or opinion on laws expressed in the Bid Documents.

MPUVNL, its representatives, employees and advisors make no representation or warranty, express or implied, and will have no liability to any Person, including any Bidder, under any law, contract, statute, principles of restitution, rules or regulations or tort or otherwise for any loss, damage, cost or expense which may arise from or that may be incurred or suffered on account of anything contained in the Bid Documents or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the Bid Documents and any assessment, assumption, statement or information contained in the Bid Documents or deemed to form part of the Bid Documents or arising in any way.

MPUVNL and its employees and advisors also accept no liability of any nature, whether resulting from negligence or otherwise, however caused or arising from reliance of any Bidder upon the content of the Bid Documents.

It will be deemed that by submitting a Bid, each Bidder agrees and releases MPUVNL and its employees, agents and advisers, irrevocably, unconditionally, fully and finally from any and all liability for any claims, losses, damages, costs, expenses or liabilities in any way related to or arising from the exercise of any rights and/or performance of any obligations under the Bid Documents and/or in connection with the Bid Process, to the fullest extent permitted by applicable law and waives any and all rights and/or claims it may have in this respect, whether actual or contingent, whether present or in the future.

MPUVNL may, in its absolute discretion but without being under any obligation to do so, update, amend or supplement the information, assessment, statement or assumptions contained in the Bid Documents.

The RFP and the draft PPA have been prepared in accordance with the best industry practices. The issue of the Bid Documents does not imply that MPUVNL is bound to qualify any Bidder or to award the Project to any Bidder. MPUVNL reserves the right to reject all or any of the Bids without assigning any reasons whatsoever.

The statements and explanations contained in this RFP, the Data Room and PPA are intended to provide an understanding to the Bidders about the subject matter of this RFP and should not be construed or interpreted as limiting in any way or manner the obligations of the Selected Bidder that will be set out in the PPA or MPUVNL's right to amend, alter, change, supplement or clarify the Projects' scope or the terms of this RFP or the PPA. Consequently, any omissions, conflicts or contradictions in the Bid Documents (including this RFP) are to be noted, interpreted and applied appropriately to give effect to this intent, and no claims on that account shall be entertained by MPUVNL.

The Bidders shall bear their own costs associated with or relating to the preparation and submission of their Bids, including but not limited to, preparation, copying, postage, delivery charges and expenses associated with any demonstrations or presentations which may be required by MPUVNL, or any other costs incurred in connection with or relating to their Bids. All such costs and expenses will be borne by Bidders, and MPUVNL, its representatives, its employees and advisors will not be liable in any manner whatsoever for such costs and expenses, regardless of the conduct or outcome of the Bid Process.

## GLOSSARY

In this RFP, unless the context otherwise requires, capitalised terms shall have the meaning given to them in the table below:

<b>Addendum or Addenda</b>	means addendum or addenda to the RFP.
<b>Annex</b>	means an annexure to this RFP.
<b>Associate/Affiliate</b>	means, in relation to a Bidder, or a Member of a Consortium, a Person who Controls, is Controlled by, or is under the common Control of such Bidder or Member of a Consortium.
<b>Best Quote</b>	has the meaning ascribed to it in Clause 19.4.
<b>Bid Documents</b>	<p>means this RFP, any Addenda or written clarifications issued to the Bidders in accordance with this RFP, as relevant, and any other documents provided by MPUVNL pursuant to this RFP.</p> <p>It is clarified that, on the E-bidding Portal, 'Bid Documents' are referred to as 'Tender Documents'.</p>
<b>Bid Process</b>	means the single-stage two-part (envelope) bidding process, followed by the Reverse Auction Process for the award of the Project to the Selected Bidder, the terms of which are set out in this RFP.
<b>Bid Schedule</b>	means the Schedule set out at Schedule 1.
<b>Bidder</b>	<p>means a Company, a Limited Liability Partnership (LLP) Firm, a Partnership Firm, a Sole Proprietor, an LLC or a Consortium of these entities, which submits a Bid to MPUVNL in accordance with the provisions of this RFP.</p> <p>It is clarified that, on the E-bidding Portal, 'Bidder' is referred to as 'Supplier Organization'.</p>
<b>Bidding Consortium or Consortium</b>	means any lawful combination of Companies, LLPs, Partnership Firms, Sole Proprietors or LLC that have formed a consortium or association by fulfilling the requirements set out in this RFP, including executing a JBA, for the purpose of submitting a Bid and for developing, operating and maintaining the Project, if such consortium or association is declared as the Selected Bidder.



<b>Bids</b>	means the Proposal submitted by Bidders for the award of the Project, comprising online submissions in accordance with Clause 15.1 and the Tariff quoted at the Reverse Auction Process stage; and <b>Bid</b> shall mean any one of them.
<b>Board Resolution</b>	<p>means, in case of a Company, a resolution passed by the Board of Directors, duly certified by any director or Key Managerial Personnel of the Company, authorizing the designated individual(s) to act on behalf of the Company;</p> <p>means, in case of Sole Proprietor, a declaration or letter issued on the business letterhead, duly signed by the sole proprietor, clearly stating their identity and confirming that they are the authorized representative of the Sole Proprietor;</p> <p>means, in case of an LLP Firm, an authorization letter issued on the LLP's letterhead, signed by the designated partner(s), authorizing the concerned individual(s) to represent and act on behalf of the LLP;</p> <p>means, in case of a Partnership Firm, an authorization letter on the firm's letterhead, duly signed by all partners or by a managing partner as per the partnership deed, explicitly authorizing the individual(s) to act on behalf of the Firm.</p>
<b>Calendar Year</b>	means a year commencing on 1 January and ending on 31 December.
<b>Clause</b>	means a clause of this RFP.
<b>Company</b>	means a body corporate incorporated in: (a) India under the Companies Act, 1956 or the Companies Act, 2013, as applicable.
<b>Competent Authority</b>	has the meaning ascribed to in the office memorandum or by the MPUVNL.
<b>Conflict of Interest</b>	has the meaning ascribed to it in Clause 3.2(a).
<b>Contract Year</b>	means the First Contract Year and thereafter each period of 12 (twelve) months, provided that the last Contract Year shall end on the last day of the Term.

<b>Control</b>	means the ownership, directly or indirectly, of more than 50% (fifty percent) of the voting shares of such company or the right to appoint majority directors. The term “ <b>Controls</b> ” and “ <b>Controlled</b> ” shall be construed accordingly.
<b>Corrigendum or Corrigenda</b>	means a corrigendum or corrigenda to the RFP.
<b>Data Room</b>	<p>means the virtual data room that will be open to Bidders and their advisors from the date specified in Schedule 1 until the Proposal Due Date.</p> <p>It is clarified that, on the E-bidding Portal, ‘Data Room’ is referred to as ‘Buyer Data-Room Tender-Specific (BDR-TS)’.</p>
<b>DDO</b>	means the Drawing and Disbursing Officer of the Department in the District.
<b>Delivery Point</b>	has the meaning ascribed to in the Power Purchase Agreement.
<b>Department(s)</b>	means the Madhya Pradesh State Government Department(s) whose available Premises in District of the State are proposed under this RFP for installation, commissioning and operation of the rooftop solar PV system(s) under net-metering mode.
<b>Direct Promoter</b>	means an entity which directly holds more than 50% (fifty percent) of the voting shares of a company or the right to appoint majority directors.
<b>District</b>	means the Seoni District of the state of Madhya Pradesh.
<b>District Level Committee or DLC</b>	means district level committee under chairmanship of Collector of concerned district.
<b>Document Cost</b>	means the amount of INR 25,000 (Indian Rupees Twenty-Five Thousand) exclusive of applicable taxes, payable by Bidders, in accordance with Clause 23.3, towards the cost of the Bid Documents.

<b>E-bidding Portal</b>	<p>has the meaning ascribed to it in Clause 2.2.</p> <p>It is clarified that, on the E-bidding Portal, the term ‘E-bidding Portal’ is referred to as ‘ElectronicTenderSystem® (ETS)’ – URL: <a href="https://www.bharat-electronictender.com">https://www.bharat-electronictender.com</a></p>
<b>Eligible Bidder</b>	means a Bidder who is determined to be eligible to participate in the Reverse Auction Process on the basis of its Proposal, in accordance with Clause 19.2.
<b>EMD</b>	has the meaning ascribed to it in Clause 7.1.
<b>Equity</b>	means the sum expressed in INR representing the paid-up share capital of the Solar Power Developer for meeting the equity component of the total project cost and shall include convertible instruments or other similar form of capital, which shall compulsorily convert into equity share capital of the Solar Power Developer and any subordinated shareholder loan.
<b>Financial Capacity</b>	has the meaning ascribed to it in Clause 17.5(a).
<b>Financial Proposal</b>	<p>has the meaning ascribed to it in Clause 15.1(b).</p> <p>It is clarified that, on the E-bidding Portal, ‘Financial Proposal’ is referred to as ‘Financial Bid-Part or Financial Envelope or Financial-Part’.</p>
<b>Financial Year</b>	means a year commencing on 1 April of any Calendar Year and ending on 31 March of the following Calendar Year.
<b>First Contract Year</b>	<p>means the period commencing from the following day of the first Unit COD; and expiring at the end of the month in which the Project completes 12 (twelve) months from the Project SCSD.</p> <p><i>It is clarified that first Unit COD means the commissioning of first Unit of the Project.</i></p>
<b>GoI</b>	means the Government of India.
<b>GoMP</b>	means the Government of Madhya Pradesh.
<b>INR</b>	means Indian Rupees, the lawful currency of the Republic of India.

<b>ISN-ETS</b>	means M/s ISN ElectronicTender Services Private Limited.
<b>JBA or Joint Bidding Agreement</b>	means a binding joint bidding agreement to be entered into by the Members of a Consortium, substantially in the form set out in Annex 5.
<b>kW</b>	means one Kilo Watt, where Watt is an SI unit of power, equivalent to one joule per second, corresponding to the rate of consumption of energy in an electric circuit where the potential difference is one volt and the current one ampere.
<b>Lead Member</b>	in the context of a Consortium, means the Member who contributes at least 51% (fifty one percent) of the required Net Worth for qualification, commits to hold the required Equity in the SPV in accordance with Clause 3.1(e)(vi) and is authorized by the other Members of the Consortium, to act as the lead member with the rights and obligations set out in this RFP.
<b>LLC</b>	means limited liability company, and not a Company.
<b>LLP</b>	means a Limited Liability Partnership Firm (LLP) registered under section 12 of Limited Liability Partnership Act, 2008, as amended.
<b>LOA</b>	means a letter of award that will be issued by MPUVNL to the Selected Bidder for the Project in accordance with the terms of this RFP.
<b>Member</b>	means a member of a Consortium.
<b>MNRE</b>	means the Ministry of New and Renewable Energy, GoI.
<b>MPERC</b>	means Madhya Pradesh Electricity Regulatory Commission.
<b>MPUVNL</b>	means Madhya Pradesh Urja Vikas Nigam Limited, a GoMP enterprise, which is designated as the nodal agency for implementing GoI and GoMP's programmes and policies in the renewable energy sector in Madhya Pradesh.

<b>Net Worth</b>	means in case of a Company, the total net worth as calculated in accordance with the Companies Act, 2013.
<b>Office Memorandum</b>	means the Office Memorandum F. No. 7/10/2021-PPD (1) dated 23 February 2023 issued by the Ministry of Finance, Department of Expenditure, Public Procurement Division, Government of India to amend Rule 144 of the General Financial Rules along with all subsequent amendments and clarifications.
<b>Paisa</b>	means one-hundredth of INR.
<b>Partnership Firm</b>	means a Partnership Firm having executed partnership deed and registered as per sections 58 & 59 of the Partnership Act, 1932, as amended.
<b>Pass-Phrase</b>	has the meaning ascribed to it in Schedule 2.
<b>Payment Security Agreement</b>	means the payment security agreement to be executed between the Selected Bidder and the MPUVNL to ensure timely payment in case of the Procurer(s) failure to make timely payment.
<b>PBG(s)</b>	has the meaning ascribed to it in Clause 8.2.
<b>Person</b>	means any corporation, company, partnership, limited liability company, association, joint stock company, trust, unincorporated organization, joint venture or other legally recognized entity of whatever nature.
<b>Power Purchase Agreements or PPAs</b>	means the power purchase agreement to be executed by the Solar Power Developer with the DDO of concerned Department of the District in the state of Madhya Pradesh for the Project.
<b>Pre-Bid Meeting</b>	has the meaning ascribed to it in Clause 5.2.
<b>Premises</b>	Means any land, building or structure of part thereof of combination thereof, wherein a separate meter or metering arrangement has been made by the licensee for measurement of electricity.

<b>Procurer(s)</b>	<p>shall mean, collectively, all the Drawing and Disbursing Officers of concerned Departments in District.</p> <p>For the avoidance of any doubt, it is clarified that one Solar Power Developer selected for a Project (all the Units in a District) shall execute a separate PPA with each DDO of the concerned Department in the District.</p>
<b>Project</b>	<p>shall mean the solar energy generation facilities of defined capacity, as per RFP, in District (awarded to the Solar Power Developer pursuant to the Bid Process), developed and owned by the Solar Power Developer, for supply of solar power to identified sites of District under Net-Metering mode. Project shall include Sites of various capacities as provided in the Data Room. Each Unit shall supply power for the consumption at the respective Site as per the terms and condition of PPA.</p> <p>It is clarified that, on the auction screen of the E-bidding Portal, 'Project' would be referred to as 'Entity for Auction'.</p>
<b>Project COD</b>	shall have the meaning ascribed to it in the PPA.
<b>Project SCSD</b>	shall have the meaning ascribed to it in the PPA.
<b>Proposal</b>	<p>means collectively the Qualification Proposal and the Financial Proposal, to be submitted by the Bidders in accordance with this RFP.</p> <p>It is clarified that, on the E-bidding Portal, 'Proposal' is referred to as 'Bid' or 'Tender'.</p>
<b>Proposal Due Date</b>	<p>means the last date specified in Schedule 1 for submission of the Proposal.</p> <p>It is clarified that, on the E-bidding Portal, 'Proposal Due Date' is referred to as 'Last Date and Time of Receipt of Bids'.</p>
<b>Qualification Proposal</b>	<p>means the qualification proposal, comprising of the documents set out in Clause 15.1(a), to be submitted by a Bidder as a part of its Bid pursuant to this RFP.</p> <p>It is clarified that, on the E-bidding Portal, 'Qualification Proposal' is referred to as 'Technical-Part' or 'Technical Envelope' or 'Technical Bid-Part'.</p>

<b>Qualified Bidders</b>	has the meaning ascribed to it in Clause 2.1(a).
<b>Reverse Auction Process</b>	<p>means the reverse auction to be conducted to determine the Selected Bidder, in accordance with Clause 20.</p> <p>It is clarified that, on the E-bidding Portal, 'Reverse Auction Process' is referred to as 'ReverseAuction' or 'e-ReverseAuction'.</p>
<b>RFP</b>	means this Request for Proposal.
<b>Schedule</b>	means a schedule to this RFP.
<b>Scheduled Bank</b>	means a bank listed under the second schedule of the Reserve Bank of India Act, 1934.
<b>Selected Bidder</b>	<p>means the Eligible Bidder selected by MPUVNL for award of the PPA for the Project, following the completion of the Bid Process.</p> <p>It is clarified that, on the E-bidding Portal, 'Selected Bidder' is referred to as 'Awardee'.</p>
<b>Site(s)</b>	<p>means the identified locations provided in the Data Room for installation, commissioning and operation of the rooftop solar PV system(s).</p> <p><i>Single site shall be termed as Site and multiple sites shall be termed as Sites.</i></p>
<b>Solar Power Developer or SPD</b>	<p>means solar power developer, and for the purposes of executing the PPA, will mean:</p> <ul style="list-style-type: none"> <li>(a) the SPV incorporated by the Selected Bidder; or</li> <li>(b) the Selected Bidder itself, if it is a single entity (Company/ LLP/ Sole Proprietor/ Partnership Firm), and not a Consortium or a foreign Company or an LLC and has elected not to incorporate an SPV to implement the Project; or</li> <li>(c) Affiliate of the Selected Bidder or its SPV.</li> </ul>

<b>Sole Proprietor</b>	means a business that is owned, managed, and controlled by one individual and governed through various registrations under existing laws as Shops and Establishment Act (state-wise), GST Act (if applicable), Income Tax Act, 1961, MSME Act, 2006 (for Udyam registration).
<b>SPV</b>	means a special purpose vehicle to be incorporated under the (Indian) Companies Act, 2013 by a Selected Bidder.
<b>Tariff</b>	means the tariff that will be applicable to the Project for the First Contract Year, and that will be escalated by 3% at the start of each subsequent Contract Year for a total of 15 (fifteen) Contract Years, in accordance with the Power Purchase Agreement. <i>It is clarified that the Tariff after escalation (second year onward) will be considered up to two decimals in place, by rounding up the first decimal if it is 5 (five) or above and rounding down the first decimal if it is below 5 (five).</i>
<b>Term</b>	means the period starting from PPA execution date of the Project till the expiry of a period of 25 (twenty-five) Contract Years from the Project SCSD.
<b>Unit</b>	Means the rooftop solar PV system designed, installed, commissioned, and operated by the Selected Bidder at a Site. <i>For Clarification, each Site with rooftop solar PV system shall be termed as Unit.</i>
<b>Units</b>	means all the Site(s), provided in the Data Room, where rooftop solar PV systems of different capacities are proposed to be installed, commissioned and operated. All the Units in a District collectively termed as Project.
<b>Unit COD</b>	shall have the meaning ascribed to it in the PPA.



## SECTION I

### INTRODUCTION

#### 1. BACKGROUND

1. In line with the GoI's target of installing 500 GW of renewable power capacity in India by the year 2030, the GoI has launched PM-Surya Ghar: Muft Bijli Yojana and further has issued the Operational Guidelines for "Saturation of Government Buildings with Rooftop Solar under PM-Surya Ghar: Muft Bijli Yojana".
2. Madhya Pradesh Urja Vikas Nigam Limited is the nodal agency for the promotion, necessary support and facilitation for the installation of rooftop solar PV systems under PM-Surya Ghar: Muft Bijli Yojana. Madhya Pradesh Urja Vikas Nigam Limited is issuing this RFP for selecting the Solar Power Developers for setting up of cumulative 983 kW of grid-connected rooftop solar PV Systems at the identified Sites of District in the state of Madhya Pradesh.
3. Madhya Pradesh Urja Vikas Nigam Limited had decided to select a Solar Power Developer to develop Units of different sizes of grid-connected rooftop solar PV Systems at identified Sites of the District in the state of Madhya Pradesh. The energy generated from each Unit is proposed to be procured by the consumer of the respective Site under the Net-Metering/ Group Net Metering modes.
4. Madhya Pradesh Urja Vikas Nigam Limited, in its capacity as the bidding authority and the authorized representative on behalf of all the Departments, is responsible for carrying out the bid process for the installation of grid-connected rooftop solar PV Systems, and is inviting proposals from all interested entities by launching a single stage two-envelope competitive bidding process followed by a reverse auction process pursuant to a request for proposal issued on 21.01.2025. The Selected Developer of the respective Project shall be awarded all the Units of the Project.
5. The Unit wise specific details will be provided in the Data Room. The Solar Power Developer will be selected through an open competitive bidding process in accordance with the procedure set out in this RFP. This RFP has been prepared, and the Bid Process shall be conducted, in accordance with the requirements of the PM-Surya Ghar: Muft Bijli Yojana.
6. The Units will be developed at pre-identified Sites of District. The Selected Bidder for the Project will be required to sign a Power Purchase Agreement with each DDO for related Units of the concerned Departments in the District (details are available in Annex 11). The Power Purchase Agreement, drafts of which will be issued by Madhya Pradesh Urja Vikas Nigam Limited before the Proposal Due Date, sets out further details regarding installation and commissioning of the Project.
7. Unit wise capacity assessment is provided in the Annex 11. Bidder should undertake necessary due diligence of all the Units of the District prior to quote the Tariff for the Project. Also, it is suggested that capacity assessment methodology should be followed while conducting necessary Site(s) survey and suggesting the revision in Unit capacity, if any, as per PPA.
8. In case of additional demand or additional Unit(s) beyond the capacity/ Unit(s) mentioned in this RFP for Project, MPUVNL may allocate the additional capacity/ Unit(s) to the Selected Bidder at the terms and conditions of this RFP and PPA on mutual agreement basis. In such

cases, suitable modification may be made in the PPA to include the new DDO/ procurer/ beneficiary and their requirement specific to the site. However, addition of new Unit(s) is subject to the approval from the District Level Committee prior to the Effective Date and maximum allocation permissible is 50% of the Bid capacity in this RFP.

9. **Power Injection**

Selected Solar Power Developer shall be required to connect each Unit of the District at the Interconnection Point for Net Metering of respective Sites under the Net Metering arrangement under the Madhya Pradesh Electricity Regulatory Commission (Grid Interactive Renewable Energy Systems and Related Matters) Regulation [Revision II], 2024 {RG-39(II) of 2024} and its amendment thereof or under the related Regulation of other State Electricity Regulatory Commission where the Unit is located. Selected Developer shall be required to develop rooftop solar PV system and shall be responsible for evacuation of power metering arrangement and replacement of meter as per applicable MPERC Regulation.

10. **Power Off-take**

Energy generated from each Unit of the District will be purchased by concerned DDO of the Department in accordance with the provisions of the Power Purchase Agreement.

## SECTION II

### BID PROCESS

#### PART A. GENERAL

#### 2. DESCRIPTION OF BID PROCESS

- 2.1 In order to identify the Selected Bidder, MPUVNL shall follow a Bid Process comprising a single-stage 2 (two) part (envelope) bidding process, followed by the Reverse Auction Process, as explained below:

(a) Qualification

Bidders are required to submit a Proposal consisting of 2 (two) parts (envelopes): (i) the Qualification Proposal as described in Clause 15.1(a); and (ii) the Financial Proposal as described in Clause 15.1(b). The Qualification Proposal will be opened first. The determination of responsiveness of the Qualification Proposal and the evaluation of the Financial Capacity of the Bidder will be done in accordance with Clause 16 and Clause 17 respectively. Bidders who meet the minimum Net Worth requirement and whose Qualification Proposal is responsive shall be qualified for opening of their Financial Proposal (**Qualified Bidders**).

(b) Financial Proposal

MPUVNL shall open the Financial Proposals of only the Qualified Bidders to determine their responsiveness in accordance with Clause 18 and to identify the Eligible Bidders in accordance with Clause 19. The Eligible Bidders shall be eligible to participate in the Reverse Auction Process.

(c) Reverse Auction Process

The Eligible Bidders shall participate in the Reverse Auction Process, in accordance with Clause 20, for determination of the Selected Bidder.

- 2.2 For conducting the E-bidding, MPUVNL will use the portal <https://www.bharat-electronictender.com> managed by ISN ElectronicTender Services Private Limited (referred as ISN-ETS) (**E-bidding Portal**). Bidders are required to register themselves online on E-bidding Portal (if they are not already registered) as 'Supply-Organization/Bidder', by paying the requisite 'Buyer-specific Annual Portal Registration Fee' to ISN-ETS of INR 3,000 (Indian Rupees Three Thousand) (plus applicable taxes as indicated in the E-bidding Portal), through NEFT/IMPS in accordance with the instructions provided on the E-bidding Portal, or through any alternative modes indicated on the E-bidding Portal. Subsequently, the Bidders will be able to download the RFP and other Bid Documents from the E-bidding Portal. It is further clarified that in case a Bidder intends to participate in tenders published by any other organization on the E-bidding Portal, the 'Annual Portal Registration Fee' as applicable will be payable. A Bidder who is already validly registered on the E-bidding Portal (i.e., registered under 'General' category or 'Buyer-Specific for MPUVNL') need not register again on the E-bidding Portal. In case a Bidder is already validly registered on the E-bidding Portal for bid processes in relation

to other organizations, such a Bidder may also upgrade to 'General' category by paying the applicable fee prescribed on the E-bidding Portal.

Further details regarding E-bidding process, registration requirements and other details are set out in Schedule 2.

### 2.3 Bidding Parameter

In the Financial Proposal and the Reverse Auction Process, the Bidders will quote the Tariff for the Project for the First Contract Year.

The last lowest Tariff quoted by an Eligible Bidder(s) during the Reverse Auction Process, for the Project, will be the sole criterion for determining the Selected Bidder for the Project. If at the end of the Reverse Auction Process, no bids are received from any of the Eligible Bidders for the Project, the Eligible Bidder with the Best Quote for the Project, as identified in accordance with Clause 19.4, will be awarded the Project.

## 3. ELIGIBILITY OF BIDDERS

### 3.1 Nature of Bidding Entity

- (a) Any Bidder, which is a Company/ LLP Firm/ Sole Proprietor/ Partnership, or a Consortium, shall be eligible to submit a Bid. The term Bidder used in this RFP applies to both a single entity and a Consortium. In case the LLC fails to incorporate as an Indian Company before signing of the PPA or is not able to sign the PPA, then MPUVNL shall be entitled to invoke the EMD of such Bidders and take applicable action, as prescribed under Clause 7 of the RFP. **Only such LLCs which are formed by Companies shall be eligible to participate.**
- (b) Where a Bidder is a single entity and is declared as the Selected Bidder, it may at its option form an SPV to execute the PPA. However, if such Selected Bidder is a Consortium or a foreign Company or an LLC, then it will be mandatory for such Selected Bidder to incorporate an SPV to execute the PPA, keeping the original shareholding unchanged. Further, if the Selected Bidder is a foreign Company, it shall comply with all laws relating to foreign direct investment in India.
- (c) The shareholders of the Bidder will be required to continue to legally and beneficially hold 74% (seventy-four percent) of the total Equity with voting rights of the Bidder, from the date of submission of the Proposal until the completion of the Bid Process and, if the Bidder is determined to be the Selected Bidder and it chooses (in case of a Selected Bidder being a single entity) to incorporate an SPV, then until incorporation of the SPV.

In case of the Bidder being a Consortium, the shareholders of each Member of the Consortium (other than a Member being a listed company) will be required to continue to legally and beneficially hold up to 74% (seventy-four percent) of the total Equity with voting rights of the respective Member of the Consortium, from the date of submission of the Proposal until the completion of the Bid Process and, if the Bidder is determined to be Selected Bidder, then until incorporation of the SPV.

- (d) The Direct Promoters of the Selected Bidder (where such Selected Bidder is a single Company/ LLP/ Sole Proprietor/ Partnership Firm), as on the date of submission of the Bid, shall not cede control of the Selected Bidder until the expiry of a period of 1 (one) year from the Project COD, unless permitted otherwise by the Procurer. For this purpose, the Selected Bidder shall provide a shareholding certificate, duly authorised by its statutory auditor containing information about its Direct Promoters and their shareholding in the Selected Bidder to MPUVNL at the time of the bid submission.

In addition, where the Selected Bidder is a single Company/ LLP/ Sole Proprietor/ Partnership Firm and it chooses to incorporate an SPV, then the Selected Bidder shall legally and beneficially hold not less than 51% (fifty-one percent) of the total Equity with voting rights of the SPV from the date of incorporation of the SPV and until the expiry of a period of 1 (one) year from the Project COD, unless permitted otherwise by the Procurer.

*Explanation: For the purpose of this provision “control” shall mean the ownership, directly or indirectly, of more than 50% (fifty per cent) of the voting shares of such Company or right to appoint majority directors.*

- (e) If the Selected Bidder is a Consortium, then the Consortium and its Member shall, in addition to incorporating an SPV, comply with the following conditions:
- (i) The number of Members in such Consortium shall not exceed 2 (two).
  - (ii) The Qualification Proposal submitted by the Consortium should contain the required information of each Member of the Consortium in accordance with Clause 15.1.
  - (iii) The Members of the Consortium shall nominate the Lead Member. Such nomination shall be supported by a power of attorney signed by the Member of Consortium (and duly acknowledged by the Lead Member) and shall substantially be in the form set out in Annex 4. The Lead Member shall have the authority to represent the Member of the Consortium during the Bid Process, and until the incorporation of the SPV.
  - (iv) The Consortium shall submit a binding and enforceable JBA to MPUVNL with its Bid, substantially in the form set out at Annex 5.

Except as specifically permitted in accordance with the Bidding Documents, the Members of the Consortium shall not amend, vary or terminate the JBA at any time during the validity period of the Bid, as specified in Clause 13.1, and if such a Consortium is determined to be the Selected Bidder then until the expiry of a period of 1 (one) year from the Project COD of the Project, without the prior written consent of Procurer.

- (v) The Members of the Consortium shall undertake that they shall be jointly and severally responsible and liable for meeting all of the Solar Power Developer's obligations in relation to the Project.

- (vi) The Members of the Consortium shall subscribe and continue to legally and beneficially hold not less than 51% (fifty-one percent) of the total Equity with voting rights of the SPV from the date of incorporation of the SPV until the expiry of a period of 1 (one) year from the Project COD, unless permitted otherwise by the Procurer. Provided that the Lead Member shall subscribe and hold not less than 26% (twenty six percent) of the total Equity and voting rights of the SPV from the date of incorporation of the SPV until the expiry of a period of 1 (one) year from the Project COD, unless permitted otherwise by the Procurer. Further, the Members of the Consortium, as on the date of submission of the Bid, shall not cede control of the Consortium until the expiry of a period of 1 (one) year from the Project COD of the Project, unless permitted otherwise by the Procurer.

*Explanation: For the purpose of this provision “control” shall mean the ownership, directly or indirectly, of more than 50% (fifty per cent) of the voting shares of such Consortium or right to appoint majority directors.*

Provided, further, that the Member(s) of the Consortium whose Net Worth was assessed for the purposes of demonstrating that the Consortium has the Financial Capacity to undertake the Project, must hold not less than 26% (twenty six percent) of the total Equity and voting rights of the SPV from the date of incorporation of the SPV until the expiry of a period of 1 (one) year from the Project COD, unless permitted otherwise by the Procurer.

Provided however, at all times from the date of incorporation of the SPV until 1 (one) year from the Project COD, in case of any change in shareholding of the SPV up to 49% (forty nine percent) of the total Equity with voting rights of the SPV, the Selected Bidder (i.e., the Lead Member and the Member of the Consortium) and the new shareholder of the SPV shall, individually or collectively, continue to maintain the Financial Capacity for the capacity of the Project.

- (f) The Selected Bidder or the shareholders of the Selected Bidder, as the case may be, will be entitled to, without seeking any prior consent from the Procurer, dilute its shareholding in the Equity of the SPV or the Selected Bidder, as the case may be, below the levels stated in Clause 3.1 (d) and 3.1(e)(vi) after the expiry of a period of 1 (one) year from the Project COD.

### 3.2 General Conditions of Eligibility

- (a) A Bidder shall not have a conflict of interest that affects the Bid Process (**Conflict of Interest**). Any Bidder found to have a Conflict of Interest shall be disqualified. A Bidder shall be deemed to have a Conflict of Interest affecting the Bid Process, if:
  - (i) such Bidder or an Associate/Affiliate of such Bidder:
    - (A) Controls, is Controlled by or is under common Control with any other Bidder or any Associate/Affiliate thereof; or

- (B) has any direct or indirect ownership interest in any other Bidder or Associate/Affiliate thereof,

provided that this disqualification shall not apply if:

- (C) the direct or indirect ownership interest in such other Bidder or Associate/Affiliate thereof is less than 20% (twenty percent); or
  - (D) the Control or ownership interest is exercised or held by the Government of India, any State Government, or jointly between the Government of India and a State Government, a bank, insurance company, pension fund, sovereign wealth fund or a public financial institution referred to in Section 2(72) of the Companies Act, 2013; or
- (ii) such Bidder is also a constituent of another Bidder; or
  - (iii) such Bidder or its Associate/Affiliate receives or provides any direct or indirect subsidy, grant, concessional loan or subordinated debt from or to any other Bidder or such other Bidder's Associate/Affiliate; or
  - (iv) such Bidder, or its Associate/Affiliate has a relationship with another Bidder, or such other Bidder's Associate/Affiliate, directly or through common third party/parties (including advisors), that puts either or both of them in a position to have access to the other's information about, or to influence, the Bid of the other; or
  - (v) such Bidder, or its Associate/Affiliate has participated as a consultant to MPUVNL in the preparation of any documents, design or technical specifications of all the Units of the Project.

*Explanation: If a Bidder is a Consortium, then the term "Bidder" as used in this Clause 3.2(a) shall include each Member of such Consortium; and the term "Associate/Affiliate" as used in this Clause 3.2(a) shall include Associates/Affiliates of each Member of the Consortium.*

- (b) A Bidder shall be liable for disqualification if any legal, regulatory, financial or technical advisor of MPUVNL, advising MPUVNL directly or indirectly, in relation to the Project engaged by the Bidder, its Member or any of its Associate/Affiliate, as the case may be, in any manner for matters related to the submission of the Bid. For the avoidance of doubt, this disqualification shall not apply where such advisor was engaged by the Bidder, its Member or any of its Associate/Affiliate in the past but its assignment expired or was terminated prior to the date of issuance of this RFP.
- (c) If on or before expiry of a period of 1 (one) year from the Project COD, in accordance with the PPA:
  - (i) a Bidder is likely to breach or breaches its undertakings under Clause 3.1(d) or a Member of a Consortium is likely to breach or breaches any of its undertakings under Clause 3.1(e)(vi); or

- (ii) any Associate/Affiliate, whose financial credentials have been relied on by the Bidder or a Member of the Consortium to demonstrate Financial Capacity, ceases or will cease to be an Associate/Affiliate of the Bidder or such Member,

then the Bidder shall give MPUVNL notice of such occurrence immediately forthwith along with all relevant particulars of such occurrence. If MPUVNL is of the view that such occurrence is likely to affect the Financial Capacity of the Bidder or the Consortium adversely, then MPUVNL may disqualify the Bidder from participation in the Bid Process; or, if the Bidder has been declared as the Selected Bidder, withdraw the LOA without MPUVNL incurring any liability towards such Selected Bidder for such withdrawal or termination.

If the events set out in Clause 3.2(c)(i) or Clause 3.2(c)(ii) above takes place after execution of the PPA, then the Bidder shall give all the Procurer notice of such occurrence forthwith along with all relevant particulars of such occurrence. If all the Procurer are of the view that such occurrence is likely to affect the ability of the Solar Power Developer to undertake its obligations set out in the PPA, then the Procurer shall terminate the PPA, without incurring any liability towards the Solar Power Developer, in accordance with the terms of the PPA.

While MPUVNL or the Procurer, as the case may be, will not unreasonably withhold or delay taking a decision pursuant to the notice issued by Bidder under Clause 3.2 (c), the decision of MPUVNL or the Procurer, as the case may be, will be final in this regard.

- (d) If any Person or any of its Associate/Affiliate or their directors whose financial credentials have been relied on by the Bidder (either wholly or in part for demonstrating its Financial Capacity) has been barred or blacklisted by any government agency or authority in India, the government of the jurisdiction of the Bidder or Members where they are incorporated or the jurisdiction of their principal place of business and the bar subsists as on the Proposal Due Date, then such Person shall not be eligible to submit a Bid, either individually or as a Member of a Consortium. If any time during the Bid Process, MPUVNL finds that the Bidder or a Member of a Consortium is so barred or blacklisted, then MPUVNL may disqualify the Bidder from participation in the Bid Process.
- (e) A Bidder or any of its Associate/Affiliate (and in the case of a Consortium, the Members and their Associate/Affiliate) whose financial credentials have been relied on by the Bidder (either wholly or in part for demonstrating its Financial Capacity) should not have, in the 3 (three) years immediately preceding the Proposal Due Date:
  - (i) failed to perform any contract exceeding a contract value of INR 1,47,45,000 (Indian Rupees One-crore Forty-Seven Lakh Forty-Five Thousand Only) as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement and/or arbitration award against the Bidder, Member or their Associate/Affiliate, as the case may be and there is no appeal pending against such judicial pronouncement and/or arbitration award; or



- (ii) had any contract terminated by any government or government instrumentality for breach by such Bidder, Member or their Associate/Affiliate and there is no appeal pending against such termination before any judicial authority.

If MPUVNL finds that any of the above events have occurred or affected the Bidder or a Member of a Consortium, then MPUVNL may disqualify the Bidder from participation in the Bid Process.

- (f) A Bidder or any of its Associate/Affiliate whose financial credentials have been relied on by the Bidder, either wholly or in part for demonstrating its Financial Capacity, (and in the case of a Consortium, the Members and their Associate/Affiliate whose financial credentials have been relied on by the Bidder, either wholly or in part for demonstrating its Financial Capacity) should not:
  - (i) have been categorized as a willful defaulter by any lender, in accordance with applicable laws; or
  - (ii) have litigation pending or, to the best of such Bidder's knowledge, threatened against it, which is of a nature that could cast a doubt on the ability or the suitability of the Bidder to undertake the Project.

If MPUVNL finds that any of the above events have occurred or affected the Bidder or a Member of a Consortium, then MPUVNL may disqualify the Bidder from participation in the Bid Process.

- (g) MPUVNL reserves the right to seek information and evidence from the Bidders regarding their continued eligibility at any time during the Bid Process and each Bidder shall undertake to provide all of the information and evidence requested by MPUVNL.

### 3.3 **Additional Conditions of Eligibility**

The Office Memorandum prescribes certain conditions of eligibility for Bidders from countries which share land borders with India, except those countries to which Government of India has extended lines of credit or in which the Government of India is engaged in development projects. The conditions of eligibility for such Bidders are as below:

- (a) Any Bidder from a country which shares a land border with India will be eligible to Bid in this tender only if such Bidder is registered with the Competent Authority.

In case of such Bidder being a Consortium, all Members of the Consortium should be registered with the Competent Authority.

- (b) For the purpose of this Clause 3.3, "Bidder from a country which shares a land border with India" means:
  - (i) an entity incorporated, established or registered in such a country; or
  - (ii) a subsidiary of an entity incorporated, established or registered in such a country; or

- (iii) an entity substantially ‘controlled’ through entities incorporated, established or registered in such a country; or
  - (iv) an entity whose ‘beneficial owner’ is situated in such a country; or
  - (v) an Indian (or other) agent of such an entity; or
  - (vi) a Consortium where any Member of the Consortium falls under any of the above provision of this sub-Clause 3.3(b).
- (c) A “beneficial owner” for the purpose of sub-Clause 3.3(b) above will be the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a ‘controlling ownership interest’ or who exercises control through other means.
- Explanation: (i) ‘controlling ownership interest’ for the purpose of sub-Clause 3.3(c) means ownership or entitlement to more than 25% (twenty five percent) of Equity of the company;*
- (ii) ‘control’ for the purpose of sub-Clause 3.3(b) and sub-Clause 3.3(c) shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements.*
- Where no natural person is identified, the beneficial owner is the natural person who holds the position of senior managing official.
- (d) For the purpose of sub-Clause 3.3(b), an agent is a person employed to do any act for another, or to represent another in dealings with any third person.
- (e) All other provisions of the Office Memorandum (except para 17 of the Office Memorandum), whether or not expressly stated in this RFP, will be applicable to this tender and the aforesaid clauses will be interpreted in line with the Office Memorandum.

## **4. DATA ROOM AND SITE VISIT**

### **4.1 Data Room**

MPUVNL will set up the Data Room and provide access to the Data Room by the date specified in Schedule 1. The detailed instructions for the process of accessing the Data Room will be given to the Bidders who register on the E-bidding Portal. The Data Room will be open to the Bidders until the Proposal Due Date. Information available with MPUVNL that pertains to or that is relevant to the development of all the Units of the Project, will be added to the Data Room from time to time. The Bidders are invited to familiarize themselves with all such information made available in the Data Room and to examine the Sites in greater detail, and to carry out, at their cost, such studies as may be required for submitting their respective Bids. The information provided in the Data Room will be provided only as a preliminary reference point by way of assistance to the Bidders. Nothing provided in the Data Room shall be binding on MPUVNL or confer any right on the Bidders. MPUVNL shall have no liability whatsoever in relation to or arising out of any or all contents of the information provided in the Data Room.

Notwithstanding anything contained in Clause 23.3, all Bidders registered with E-Bidding Portal shall be provided access to the Data Room. For enabling such access, Bidders are required to share their organization ID on the E-Bidding Portal with MPUVNL. For the avoidance of doubt, it is clarified that Bidders shall pay the Document Cost as mentioned in Clause 23.3, prior to submission of Qualification Proposal.

#### **4.2 Due Diligence of Site(s) and its Visit**

The Bidders are also advised to do the necessary assessment of all the given Site(s) and Unit details provided in the Data Room and familiarize themselves with the on-ground conditions without waiting for the PPA to be issued. Bidders are free to visit the site on their own by informing MPUVNL at least seven Days prior to the schedule visit.

Bidders are encouraged to submit their respective Bids after necessary due diligence of all the Site(s) and ascertaining for themselves the site conditions, location, surroundings, climate, weather data, applicable laws and regulations, and any other matter considered relevant by them. If a Bidder wishes to visit any of the Site(s), then it will be required to, at least 7 (seven) days prior to the visit, send an e-mail request to [resco4.mpuvn@gmail.com](mailto:resco4.mpuvn@gmail.com), specifying the date and time of such visit and the names of the persons who will be conducting the site visit. The cost of visiting the Site(s) and verifying other information shall be borne solely by the Bidder. The deemed permission granted to a Bidder and any of its personnel or agents is subject to the express condition that the Bidder, its personnel, and agents will: (a) release and indemnify MPUVNL and its personnel, agents and advisors from and against all liability in respect thereof; and (b) be responsible for loss of or damage to property, and any other loss, damage, costs and expenses incurred, including death or personal injury, as a result of such inspection.

4.3 It will be assumed that Bidders will have accounted for all relevant factors, including technical data, site conditions, climate, weather conditions, and applicable laws and regulations, while submitting their Bids. Bidders will be deemed to have full knowledge of all the Sites and details of Units of the Project, including their rights, duties and obligations under the PPA.

4.4 New Site(s) of contract demand equal to or more than 20 kW, not included in Data Room have to be intimated to Nodal Agency as per Article 8 of PPA as Condition Precedent and relevant provisions of PPA would apply in respect of such Site(s).

### **5. CLARIFICATIONS ON BID DOCUMENTS AND PRE-BID MEETINGS**

#### **5.1 Clarifications and Queries**

- (a) If a Bidder requires any clarification on or has any query in relation to the Bid Documents, it should submit such query or request for clarification to MPUVNL in writing by e-mail to [resco4.mpuvn@gmail.com](mailto:resco4.mpuvn@gmail.com). Alternatively, the Bidder can raise its queries during the Pre-Bid Meetings referred to in Clause 5.2 below. All queries or clarification requests should be submitted on or before the date mentioned in the Bid Schedule.
- (b) MPUVNL shall make reasonable efforts to respond to the queries or requests for clarifications, on a non-attributed basis, on or before the date mentioned in the Bid Schedule. However, MPUVNL reserves the right not to respond to any query or provide any clarification, in its sole discretion and in case of any discrepancy, the Bid Document and the PPA would prevail over the responses provided by MPUVNL.

MPUVNL's responses (including an explanation of the query but not identification of its source) will be made available to all the Bidders in the manner set out in Clause 5.1(d) of this RFP.

- (c) MPUVNL may *suo-motu*, if deemed necessary, issue clarifications to all the Bidders.
- (d) MPUVNL shall respond to Bidder's queries/clarifications, through the online process provided on the E-bidding Portal i.e., the 'Clarification to Tender Documents' feature on the E-bidding Portal. While MPUVNL may choose to also communicate with the Bidders by e-mail, notice, or any other means it may deem fit, about the issuance of the clarifications, it is the Bidders responsibility to regularly visit the E-bidding Portal and keep itself updated regarding any Addendum, Corrigendum, clarification etc. that may be issued by MPUVNL.
- (e) Verbal clarifications and information given by MPUVNL or any other Person for or on its behalf shall not in any way or manner be binding on MPUVNL.

## 5.2 Pre-Bid Meetings

- (a) All Bidders are invited to attend the Pre-Bid Meetings on the dates mentioned in the Bid Schedule at the time and place to be notified by MPUVNL by e-mail to the e-mail address provided by the registered Bidders. The purpose of the Pre-Bid Meetings will be to clarify issues and answer questions on any matter relating to the Bid Documents, the Bid Process, all the Units of the Project.
- (b) All Bidders may nominate up to 2 (two) authorized representatives to participate in the Pre-Bid Meeting, by confirming their participation at least 3 (three) days prior to the Pre-Bid Meeting. Such confirmation shall be sent by e-mail to [resco4.mpuvn@gmail.com](mailto:resco4.mpuvn@gmail.com).
- (c) All Bidders are requested to submit any queries to MPUVNL, through the E-bidding Portal, at least 3 (three) days prior to the date of the Pre-Bid Meeting.
- (d) Notwithstanding Clause 5.2(c) above, during the course of the Pre-Bid Meeting all Bidders will be free to seek clarifications and make suggestions to MPUVNL.
- (e) All questions raised (without identifying the source) and the responses given, together with any responses prepared after the Pre-Bid Meeting, will be uploaded on the E-bidding Portal and communicated to the Bidders through the 'Clarification to Tender Documents' feature on the E-bidding Portal, and may also be communicated to Bidders through e-mail, notice or any other means that MPUVNL may deem fit.
- (f) Non-attendance at the Pre-Bid Meeting will not be a cause for disqualification of any Bidder from participating in the Bid Process.

## 6. AMENDMENT TO BID DOCUMENTS

### 6.1 Issuance of Addenda and Corrigenda

- (a) Up until the date that is mentioned in the Bid Schedule, MPUVNL may, for any reason, whether at its own initiative or in response to a query raised or clarification requested by a Bidder in writing, or at the Pre-Bid Meeting, amend the Bid Documents by issuing an Addendum or revise the timelines set out under Schedule 1 of the RFP (i.e., Schedule of Bid Process) by issuing a Corrigendum.
- (b) All Addenda and Corrigenda will be provided on the E-bidding Portal.
- (c) The Bidders are required to read the Bid Documents along with any Addenda and Corrigenda that may be issued in accordance with this Clause 6.
- (d) Each Addendum/Corrigendum shall be binding on the Bidders, whether or not the Bidders convey their acceptance of the Addendum/Corrigendum.
- (e) Any oral statements made by MPUVNL or its advisors regarding the Bid Process, the Bid Documents or on any other matter, including oral clarifications or information provided by or on behalf of MPUVNL at the Pre-Bid Meeting or the minutes of the Pre-Bid Meeting shall not be considered as amending the Bid Documents.
- (f) The Bidders shall be provided at least 7 (seven) days from the issue of any Addendum/Corrigendum for submission of their Bids.

## **6.2 Issuance of Revised Bid Documents**

- (a) MPUVNL shall use reasonable endeavours to issue the revised Bid Documents reflecting all the amendments and changes agreed to by MPUVNL on or before the date that is mentioned in the Bid Schedule. The revised Bid Documents issued by MPUVNL shall be definitive and binding.
- (b) MPUVNL will assume that the information contained in, or provisions of the revised Bid Documents will have been taken into account by the Bidder in its Bid. MPUVNL assumes no responsibility for the failure of a Bidder to submit the Bid in accordance with the terms of the revised Bid Documents or for any consequent losses suffered by the Bidder.

## PART B. EMD AND PERFORMANCE SECURITY

### 7. EMD

- 7.1 The Bidder shall furnish, as part of its Qualification Proposal, an earnest money deposit for an amount equal to INR 9,83,000 (Indian Rupees Nine-Lakh Eighty-Three Thousand Only) (EMD).
- 7.2 The Bidder shall provide the EMD in the form of a bank guarantee according to format set out in Annex 2 and be valid for 180 (one hundred and eighty) days from the Proposal Due Date. The EMD shall be issued in the name of the Bidder/ Lead Member and in favour of “**Madhya Pradesh Urja Vikas Nigam Limited**”, confirmed for payment at Bhopal, Madhya Pradesh. In the event of encashment of EMD, the encashed amount shall include all applicable taxes. Electronic bank guarantee (e-BG) is also acceptable against EMD under this RFP.
- 7.3 The Bidder shall furnish the bank guarantee towards EMD from any of the Scheduled Commercial Banks as listed on the website of Reserve Bank of India (RBI) and amended as on the date of issuance of bank guarantee. The bank guarantee submitted by the Selected Bidder shall be effective only when the bank guarantee issuance message is transmitted by the issuing bank through SFMS to ICICI Bank (Account No.: 656501700049 and IFSC: ICIC0006565), Client: Madhya Pradesh Urja Vikas Nigam Limited and a confirmation in this regard is received by MPUVNL. Also, Bidders would have option to provide EMD in the form of interest free FDR/ TDR/ RTGS, in which case, a copy of appropriate proof would be submitted online/ in original, as applicable.
- 7.4 In case the Bidder fails to provide the EMD as set out in this Clause 7, the Qualification Proposal submitted by such Bidder shall be rejected by MPUVNL as non-responsive. Unless invoked in accordance with Clause 7.7 below, the EMD of the unsuccessful Bidders will be returned by MPUVNL within 10 (ten) business day from the determination of the Selected Bidder in accordance with Clause 20.3.
- 7.5 If the Bidder is declared as the Selected Bidder, then the validity of the EMD of such Selected Bidder shall be extended at least 7 (seven) days prior to its expiry, for a period until such Selected Bidder submits the PBG(s), in accordance with the PPA. The EMD of such Selected Bidder will be returned upon such Selected Bidder submitting the PBG(s), in accordance with the PPA.
- 7.6 The EMD shall be valid as per the timelines stipulated above. However, shortfall in the EMD validity, if any, up to a period of 7 (seven) days shall be acceptable.
- 7.7 The Bidder, by submitting its Bid pursuant to this RFP, shall be deemed to have acknowledged and confirmed that the Bidder will suffer loss and damage on account of withdrawal of its Bid or for any default by the Bidder during the Bid validity period as set out in Clause 13 of this RFP.

The EMD shall be forfeited and appropriated by MPUVNL as mutually agreed genuine pre-estimated compensation and damages payable to MPUVNL for, *inter alia*, the time, cost and effort of MPUVNL in preparing the Bid Documents and conducting the Bid Process without prejudice to any other right or remedy that may be available to MPUVNL hereunder or otherwise, under the following conditions:

- (a) if a Bidder engages in corrupt, fraudulent, coercive, undesirable or restrictive practice as specified in Clause 28 of this RFP;
- (b) if a Bidder is disqualified in accordance with the provisions of this RFP;
- (c) if, after the Proposal Due Date, a Bidder withdraws its Bid during the Bid validity period, as extended from time to time; and
- (d) if a Bidder is selected as the Selected Bidder and it fails within the specified time limit to:
  - (i) sign and return, as acknowledgement, the duplicate copy of the LOA;
  - (ii) fulfil any other condition precedent to the execution of the PPA;
  - (iii) execute all the PPAs; or
  - (iv) submit the requisite PBG(s) under the PPA(s) to be executed for the Project.

7.8 It is clarified that MSMEs registered in Madhya Pradesh are eligible for exemption towards Bid Processing Fees and EMD/EMD.

## **8. PERFORMANCE SECURITY**

- 8.1. For the Project, The Selected Bidder shall furnish performance security of INR 2,500 (Indian Rupees Two Thousand Five Hundred Only) per kW for each PPA of the Project separately, within 7 (seven) days of acceptance of the LOA in accordance with Clause 21, to secure the obligations of the Solar Power Developer under the PPAs (**PBGs**).
- 8.2. The Selected Bidder shall provide the performance security for each PPA to be executed in the Project in the form of unconditional, irrevocable, and on-demand bank guarantees issued by a Scheduled Commercial Banks as listed on the website of Reserve Bank of India (RBI) and amended as on the date of issuance of bank guarantee. In case of the Project being implemented through a SPV incorporated by the Selected Bidder, the performance security for each PPA separately shall be furnished in the name of the SPV, except for the case as indicated in Clause 17.5(b). The performance security of each PPA shall be issued in favour of concerned Procurer (i.e. concerned DDO of the Department) and in the format set out in the PPA.
- 8.3. If the Selected Bidder fails to furnish the PBG(s) in accordance with this Clause 8, then MPUVNL shall have the right to forfeit the EMD of the Selected Bidder in accordance with Clause 7.7.
- 8.4. It may be noted that Successful Bidder shall submit the PBG(s) with a validity period up to (and including) the date set out in the relevant PPAs. On receipt and after successful verification of the total PBG(s) in the acceptable form, the bank guarantee submitted towards EMD shall be returned by MPUVNL to the Selected Bidder. It may be noted that the PPAs will be signed only upon successful verification of the PBG(s) submitted by the Solar Power Developer.

Electronic bank guarantee (e-BG) is also acceptable against PBG(s) under this RFP. Prior to signing of PPA, in case of any shortfall in validity of the PBG(s), the same will be acceptable, subject to the condition that the PBG(s) validity is enhanced by the Solar Power Developer prior to expiry of validity of the PBG(s). The Selected Bidder may also be required to submit PBG(s) under other PPA(s), as specified therein.

- 8.5. The PBG(s) are required to be submitted in the name of the entity signing the PPA and in favour of the relevant Procurers. In case of PPA being eventually signed with the SPV incorporated/utilized by the Selected Bidder, the PBG(s) may be submitted in the name of the Selected Bidder at an earlier date, if the Bidder chooses to do so, and the same shall be replaced by the PBG(s) issued in the name of the SPV, prior to signing of PPA, subject to submission of board resolution from the Selected Bidder to transfer the Project to its SPV and board resolution from the SPV accepting the said Project from the Selected Bidder.
- 8.6. The PBG(s) may be encashed by the Procurer in terms of the PPA(s).
- 8.7. The PBGs have to be executed on non-judicial stamp paper of appropriate value as per Stamp Act relevant to the place of execution.
- 8.8. All expenditure towards execution of PBGs such as stamp duty etc. shall be borne by the Bidder/ Solar Power Developer. The PBG(s) submitted by the Selected Bidder shall be effective only when the PBG(s) issuance message is transmitted by the issuing bank through SFMS to Procurer's bank.
- 8.9. After the Bid Process is over, MPUVNL shall release the bank guarantee towards EMD of the unsuccessful Bidders within 15 (fifteen) days after the completion of e-Reverse Auction. The PBG(s) shall be returned to the Solar Power Developer as per the terms of PPA(s).



## **PART C. PREPARATION AND SUBMISSION OF BIDS**

### **9. NUMBER OF BIDS**

- 9.1 Each Bidder is permitted to submit only 1 (one) Bid.
- 9.2 No Bidder shall submit more than 1 (one) Bid, either individually or, with or through any other entity(ies), including its Associate/Affiliate. A Bidder who submits or participates in more than 1 (one) Bid shall cause all the Bids with the Bidder's participation to be disqualified.

### **10. COST OF BIDDING**

The Bidders shall be responsible for all of the costs associated with the preparation of their Bid and their participation in the Bid Process. MPUVNL and its employees and advisors will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the Bid Process.

### **11. LANGUAGE OF BID AND CORRESPONDENCE**

- 11.1 The Bid prepared by the Bidder and all correspondence and documents related to the Bid exchanged by the Bidder and MPUVNL shall be in English.
- 11.2 Any printed literature furnished by the Bidder may be written in another language, as long as such literature is accompanied by a translation of its pertinent passages in English, in which case, for purposes of interpretation of the Bid, the English translation shall prevail. The translated literature shall be duly authenticated and self-certified. In case of: (a) foreign Bidders; or (b) Bidders who have relied on the credentials of foreign Associate/Affiliate, having submitted documents in any language other than English, then all such documents shall be translated in the English language by an approved translator and shall be consularized in the foreign Bidder's/foreign Associate/Affiliate's country. Supporting materials that are not translated into English may not be considered by MPUVNL.

### **12. PROPOSAL DUE DATE**

- 12.1 The Proposal shall be submitted online on or before 5:00 PM (IST) or 1700 hours (IST) on the Proposal Due Date by uploading the Proposal on the E-bidding Portal. If any Proposal is received after the specified time on the Proposal Due Date, it shall be rejected and shall not be opened by MPUVNL.
- 12.2 MPUVNL may, at its discretion and for any reason, including to afford Bidders a reasonable time for taking an Addendum into account in preparing the Proposal, extend the Proposal Due Date for all Bidders by issuing a Corrigendum in accordance with Clause 6.1, in which case all rights and obligations of MPUVNL and the Bidders will thereafter be subject to the Proposal Due Date as extended.

### **13. VALIDITY OF BIDS**

- 13.1 Each Proposal shall be valid for a period of 180 (one hundred and eighty) days from the Proposal Due Date. The Tariff submitted by an Eligible Bidder during the Reverse Auction Process shall be valid for a period not less than 180 (one hundred and eighty) days from the

date of completion of the Reverse Auction Process. A Bid valid for a shorter period may be rejected as being non-responsive.

- 13.2 In exceptional circumstances, prior to the expiration of the Bid validity period, MPUVNL may request Bidders to extend the Bid validity period. The request and the responses will be made in writing. Bidders who agree to extend the Bid validity shall also extend the validity of the EMD for an equivalent period. A Bidder may refuse to extend the Bid validity without forfeiture of its EMD. An extension of the Bid validity period will not, however, entitle a Bidder to modify its Bid.

#### **14. CURRENCIES OF BID**

All values with respect to a Tariff in the Proposal, including the bids submitted during the Reverse Auction Process should be stated in Paisa without any decimal. For illustration, a bid of INR 2.25 should be stated as 225 Paisa. It is further clarified that if a Bidder quotes any value with respect to the Tariff in the Proposal in decimals, then such values beyond decimal point will not be considered for the purposes of evaluation of the Proposal and preparation of ranking list. For illustration – a Tariff quote of 282.10 Paisa in the Proposal will be considered as 282 Paisa. Similarly, a Tariff quote of 282.80 Paisa will also be considered as 282 Paisa.

All other amounts in the Proposal that are related to Indian currency should be stated in Indian Rupees.

#### **15. SUBMISSION OF BID**

##### **15.1 Online Bid**

Each Bidder shall submit its Bid electronically on the E-bidding Portal, in accordance with the methodology set out at Schedule 2. Each Bid shall comprise of the Qualification Proposal and the Financial Proposal.

##### **(a) *Qualification Proposal***

The Qualification Proposal shall contain the scanned copy of documents set out below, in a sequential manner:

- (i) Letter of Bid, in the form set out in Annex 1.
- (ii) In case of a Bidder being a Consortium, a power of attorney signed by all the Members of Consortium and duly acknowledged by the Lead Member, in the form set out in Annex 4.

If a Member of the Consortium (other than the Lead Member) is a foreign entity, then it can also submit a board resolution, passed by the board of directors of the foreign Member of the Consortium in place of the power of attorney for the purpose of fulfilling the requirements under this Clause 15.1 (a)(ii) provided such board resolution is sufficient (as confirmed in the corresponding legal opinion issued in connection with such board resolution) for such entity to irrevocably and unconditionally appoint the Lead Member to the same extent and for the same purposes as it would have had such entity

signed and issued the power of attorney set out in Annex 4 in favour of the Lead Member.

(iii) The following board resolutions, passed by the board of directors of the Bidder, in the form set out in Annex 3 and certified by the Company Secretary or the director of the relevant Bidder:

(A) board resolution from the Bidder, and in case of a Consortium, from the Lead Member, authorising the authorised signatory to sign the Bid;

*[Note: For the avoidance of doubt, it is clarified that the Bidder may authorise an employee of its Affiliate to sign the Bid.]*

(B) board resolution from the Bidder, undertaking to invest in the SPV 100% (one hundred percent) of the equity requirement for developing the Project, if applicable; and

in case of a Consortium, board resolutions from each Member of the Consortium:

(1) undertaking to invest in the SPV amounts proportionate to their respective Equity commitment, as set out in the JBA, in such a manner that the aggregate Equity investment meets the 100% (one hundred percent) of the Equity requirement for developing the Project; and

(2) authorising a person to execute the JBA on behalf of the Member of the Consortium;

(C) board resolutions from each Member of the Consortium, including the Lead Member, undertaking to contribute any additional amount which is over and above the Equity commitment of each Member of the Consortium, as specified in the JBA, which may be required for developing the Project.

(D) board resolutions from the Associate/Affiliate, whose credentials have been relied upon by the Bidder or, in case of a Consortium, by a Member of the Consortium, undertaking to invest the entire amount committed by the Bidder or the Member of the Consortium, as the case may be, in the event of a failure of the Bidder or the Member of the Consortium, as the case may be, to make such investment.

Any board resolution submitted by a foreign entity as a part of the Qualification Proposal must be supported by an unqualified opinion issued by the legal counsel of such foreign entity stating that the board resolution(s) is in compliance with the applicable laws of the respective jurisdictions of the entity passing the board resolution and the subject matters of the board resolution are true and valid. It is clarified that the legal opinion can be subject to customary assumptions, provided that

such assumptions do not qualify the substantive aspect of the legal opinion.

**Note:** In case LLPs/ Partnership Firms/ Sole Proprietor, alternate documents may be presented in lieu of Board Resolution as defined in GLOSSARY of this RFP.

- (iv) In case of a Consortium, the JBA, in the form set out in Annex 5.
- (v) Letter of Financial Capacity, in the form set out in Annex 6, along with all requisite documents to be submitted in accordance with Clause 17.5.
- (vi) Certificate of incorporation of the Bidder and in case of a Consortium, of all the Members of the Consortium.
- (vii) If required as per Clause 3.3 above, a certificate required under the Office Memorandum, in the format set out in Annex 8.
- (viii) The detailed computation sheet by the Statutory Auditor/Chartered Accountant certifying the Net-worth of the Bidder.
- (ix) Receipt/proof of online payment made for Document Cost in accordance with Clause 23.3.
- (x) certificate from the statutory auditor of the Bidder certifying the shareholding of the Bidder (or in case of a Consortium, the relevant Member), including identifying its Direct Promoters, in the format set out in Annex 9.
- (xi) EMD, in accordance with Clause 7 and as per the format as set out in Annex 2.
- (xii) the format for disclosure, as per Annex 10.

MPUVNL has adopted the online only mode of Bid submission. However, the Selected Bidder shall be required to mandatorily submit the physical copy of the Covering Letter (as per format mentioned in Annex 1), EMD (in accordance with Clause 7 and as per the format as set out in Annex 2), unless the Bidder is submitting e-BG as EMD, Annex 4 (if applicable) and Annex 5 (if applicable) to MPUVNL within 3 (three) days of Bid Submission. MPUVNL reserves the right to reject the Bid and encash the EMD in accordance with Clause 7 if the Selected Bidder fails to submit the abovementioned original documents in accordance with the timelines mentioned in this Clause 15.1(a). Further, MPUVNL reserves the right to request Bidder for seeking additional details/ documents for the qualification purposes.

(b) ***Financial Proposal***

The Bidder shall submit its Financial Proposal and fill the Tariff for the Project in the ElectronicForms provided on the E-bidding Portal. the Tariff to be quoted in the ElectronicForms should be stated in Paisa without any decimal.

- (c) For submission of the Qualification Proposal and the Financial Proposal, the E-bidding Portal will provide the following categories, in which the Bidders will be required to submit their Proposals by providing the relevant information and uploading the relevant documents forming part of the Proposal:
- (i) **ElectronicForms:** Bidders will be required to provide relevant information, as sought on the E-bidding Portal, by filling such information in the relevant section of the ElectronicForms and encrypting the data with ElectronicEncrypter™. After filling all sections, the Bidder should preview the filled ElectronicForms, digitally sign the content, and submit the ElectronicForms.
  - (ii) **Main-Bid:** After submitting the ElectronicForms, in accordance with Clause 15.1(c)(i) above, the Bidders are required to submit the following documents forming part of the Qualification Proposal and the Financial Proposal in the relevant section of the Main-Bid for the Qualification Proposal and the Financial Proposal.

*Qualification Proposal:* The documents set out in:

- (A) Clause 15.1(a)(i), i.e., the Letter of Bid in the form set out in Annex 1; and
- (B) Clause 15.1(a)(v) and Clause 15.1(a)(ix), i.e.:
  - (1) the Letter of Financial Capacity, in the form set out in Annex 6; and
  - (2) the detailed and separate computation sheet by the Statutory Auditor / Chartered Accountant certifying the Net-worth (it is clarified that all other requisite documents to be submitted in accordance with Clause 17.5, must be submitted in the Bid-Annexures section, discussed below at Clause 15.1(c)(iii)).

*Financial Proposal:* The document set out in Clause 15.1(b), i.e., the Financial Proposal, in the format set out in Annex 7.

- (iii) **Bid-Annexures:** All documents which are listed in Clause 15.1(a) and Clause 15.1(b), and which are not expressly required to be uploaded in the Main-Bid section, as set out in Clause 15.1(c)(ii) above, will be required to be uploaded in the section titled 'Bid-Annexures' on the E-Bidding Portal.
- (d) The Bidders shall be required to submit correct, valid and operative Pass-Phrases to decrypt the Qualification Proposal and the Financial Proposal in following manner:

**Online Submission of Pass-Phrases through E-mail:** The Bidder may email the Pass-Phrases of the Qualification Proposal to MPUVNL at resco4.mpuvn@gmail.com after the 'last date and time of receipt of bids' (as set out under Schedule-1), and before 9 A.M. on the date of opening of the Qualification Proposal.

Similarly, for the Financial Proposal, the Bidder may email the Pass-Phrase of the Financial Proposal to MPUVNL at [resco4.mpuvn@gmail.com](mailto:resco4.mpuvn@gmail.com) after the Bidder has received official communication from MPUVNL about its Bid being found responsive in Qualification Proposal and being invited for the opening of the Financial Proposal, and before 9 A.M, on the date of opening of the Financial Proposal as given in the official communication from MPUVNL.

Please note that if the Pass-Phrases are submitted to any email address other than the above-mentioned email address, then such Pass-Phrases will not be considered for opening.

## **PART D. EVALUATION OF PROPOSALS**

### **16. DETERMINATION OF RESPONSIVENESS OF QUALIFICATION PROPOSALS**

16.1 MPUVNL will examine the Qualification Proposals to determine whether the Qualification Proposals are 'responsive' to the requirements of the RFP by checking:

- (a) whether they have been submitted by the Proposal Due Date;
- (b) whether they are complete and all documents comprising the Qualification Proposal have been submitted in their prescribed format;
- (c) whether the documents have been properly signed;
- (d) in case of a Consortium, whether the JBA has been signed by all Members;
- (e) whether the Document Cost and the power of attorney (if applicable) have been submitted;
- (f) whether the Qualification Proposals are generally in order including whether all documents have been submitted in the prescribed format; and
- (g) whether the EMD has been submitted in accordance with Clause 7 and Clause 15.

In the event that any Bidder is found to be disqualified in accordance with the terms of the Bid Documents or if any Qualification Proposal is found to be non-responsive or not meeting the Financial Capacity, the Qualification Proposal will be rejected by MPUVNL and not be considered for further evaluation.

16.2 If any information furnished by a Bidder is found to be incomplete or contained in formats other than those specified in the RFP, MPUVNL may, in its sole discretion, exclude such information for the purposes of determining whether the Bidder will meet the Financial Capacity. Alternatively, MPUVNL may request the Bidder, from time to time while evaluating the Qualification Proposals, to submit necessary information or documentation, within a reasonable period of time, to rectify non-material omissions related to documentation requirements. Such clarifications or information provided by the Bidder will be taken into account by MPUVNL while evaluating the Qualification Proposal, and it may qualify the Bidder on the basis of such clarifications or information provided, read along with its Qualification Proposal. If the Bidder does not provide clarifications sought under this Clause 16.2 within a specified period of time, its Qualification Proposal may be rejected as non-responsive. If the Qualification Proposal is not rejected, MPUVNL may proceed to evaluate the Qualification Proposal by construing the particulars requiring the clarification to the best of its understanding, and the Bidder will be barred from subsequently questioning such interpretation of MPUVNL.

16.3 Where any information is found to be patently false or amounting to a material misrepresentation, MPUVNL reserves the right to reject the Bid and forfeit the EMD in accordance with Clause 7.

## **17. EVALUATION OF QUALIFICATION PROPOSALS**

- 17.1 MPUVNL will determine to its satisfaction whether Bidders have submitted responsive Qualification Proposals and are eligible, as well as whether they meet the Financial Capacity requirement in accordance with Clause 17.5.
- 17.2 The determination of Financial Capacity will be based upon an examination of the documentary evidence submitted by the Bidders and any additional information which MPUVNL may receive or request from a Bidder to support such evidence.
- 17.3 An affirmative determination will be a prerequisite for MPUVNL to qualify Bidders for the opening and evaluation of the Financial Proposals.
- 17.4 After the completion of evaluation of the Qualification Proposals, MPUVNL will notify Bidders whether they are qualified for the next stage for having their Financial Proposals opened and evaluated.
- 17.5 **Financial Capacity**
- (a) For demonstrating its financial capacity (**Financial Capacity**), Bidders are required to have a minimum Net Worth of INR 98,30,000 (Indian Rupees Ninety-Eight Lakh Thirty Thousand Only). A Bidder is permitted to rely on the Net Worth of its Associate(s)/Affiliate(s), either wholly or in part, for demonstrating its Financial Capacity. In such cases, the Bidder shall be required to submit a board resolution of the Associate(s)/Affiliate(s) whose financial credentials are being relied upon by the Bidder to demonstrate the Financial Capacity, resolving to undertake to invest the entire Equity funding committed by the Bidder and to submit the bank guarantees required under the PPA, in case the Bidder fails to do so.
  - (b) The calculation of the Net Worth must be based on the unconsolidated audited annual accounts in case of a Bidder and, if relevant, an Associate/Affiliate. Provided that if a Bidder is relying on its Associate's/Affiliate's experience in accordance with Clause 17.5(a) and where such Bidder Controls such Associate/Affiliate, then the Net Worth will be calculated based on the audited consolidated annual accounts of the Bidder and of such Associate/Affiliate.
  - (c) For the purpose of the computation of the Net Worth of Companies/ LLPs/ Sole Proprietor/ Partnership Firm incorporated on or before 1 April 2023, Bidders will be required to submit unconsolidated audited annual accounts of the Financial Year ending on 31 March 2024 (or immediately preceding Calendar Year or the accounting years as adopted by the foreign Bidder, for which the Bidder is mandated to have the annual accounts audited as on the Proposal Due Date in accordance with the laws of the respective country), along with a certificate from a chartered accountant to demonstrate the fulfilment of the criteria set out in this Clause 17.5.
  - (d) Notwithstanding, Clause 17.5(c), the Net Worth requirement for demonstrating the Financial Capacity, both for Companies/ LLPs/ Sole Proprietor/ Partnership Firm incorporated on or before 1 April 2023 as well as new Companies/ LLPs/ Sole Proprietor/ Partnership Firm (i.e., those incorporated after 1 April 2023), can also be



met by the Bidder, as on the day not more than 7 (seven) days prior to the Proposal Due Date. In order to meet this requirement, the Bidder must submit a certificate from a chartered accountant certifying the Net Worth on the date not more than 7 (seven) days prior to the Proposal Due Date, along with copies of the provisional audited accounts with balance sheet, profit & loss account, schedules and cash flow statement certified by the chartered accountant.

(e) ***For Consortia***

In case of a Consortium, the Financial Capacity must be met individually or collectively by all Members of the Consortium, subject to the Lead Member demonstrating at least 51% (fifty one percent) of the Net Worth required for qualification. Provided, further, that if the Bidder is subsequently declared the Selected Bidder, then the Member(s) of the Consortium whose Net Worth was assessed for the purposes of demonstrating that the Consortium has the Financial Capacity to undertake the Project, must hold not less than 26% (twenty six percent) of the total Equity and voting rights of the SPV from the date of incorporation of the SPV until the expiry of a period of 1 (one) year from the Project COD, unless permitted otherwise by the Procurer.

The Net Worth of each Member of the Consortium, including the Lead Member, will be computed in accordance with the methodology set out above in this Clause 17.5.

- 17.6 The minimum number of Qualified Bidders should be at least 2 (two) for the Bid Process to proceed. If the number of Qualified Bidders is less than 2 (two), MPUVNL has the right, in its sole discretion, to cancel the Bid Process and/or ask for fresh Bids to be submitted.

**18. DETERMINATION OF RESPONSIVENESS OF FINANCIAL PROPOSALS**

- 18.1 Prior to evaluation of the Financial Proposals of the Qualified Bidders, MPUVNL will examine the Financial Proposals to determine whether they are complete, generally in order, provided in the specified format and are otherwise substantially responsive to the requirements of the Bid Documents.
- 18.2 If any Financial Proposal is found to be non-responsive to the requirement of the Bid Documents, such Financial Proposal will be rejected by MPUVNL and not be considered for further evaluation.

**19. EVALUATION OF FINANCIAL PROPOSALS**

- 19.1 MPUVNL will carry out an evaluation and comparison of the Financial Proposals of the Qualified Bidders and will rank the Qualified Bidders in accordance with the criteria set out in this Clause 19 to identify Eligible Bidders who will be allowed to participate in the Reverse Auction Process and also to identify the Best Quote for the Project.
- 19.2 **Eligible Bidders for Reverse Auction Process**

The Tariff (in Paisa) quoted by the Qualified Bidder in its Financial Proposal will be used for identifying for Eligible Bidders. It is clarified that the Tariff will be considered in whole

numbers and without a decimal in place, by rounding up the first decimal if it is 5 (five) or above and rounding down the first decimal if it is below 5 (five).

If the number of Qualified Bidders eligible to Bid is more than 12 (twelve), then, subject to the proviso below, 2 (two) Qualified Bidders with the highest Tariffs will be eliminated from participating in the Reverse Auction Process and all other Qualified Bidders will be eligible for participation in the Reverse Auction Process (**Eligible Bidders**). Such elimination shall be done in the manner set out below, so that the remaining Eligible Bidders are not less than 12 (twelve) in number. If the number of Qualified Bidders is 13 (thirteen), then only 1 (one) Qualified Bidder shall be eliminated. However, if the number of Qualified Bidders is higher than 13 (thirteen) then 2 (two) Qualified Bidders shall be eliminated.

Provided that if the Tariff of either or both of the Qualified Bidders with the highest Tariffs is within a range of up to 5% (five percent) of the lowest Tariff, then such Qualified Bidder(s) shall not be eliminated; or

If 2 (two) or more Qualified Bidders identified for elimination have quoted the same Tariff, then none of these Qualified Bidders would be eliminated.

### 19.3 **Preparation of Ranking List**

A ranking list will be prepared by separately listing the Tariffs quoted by each Eligible Bidder.

Each entry in the ranking list will have a Tariff and an Eligible Bidder's name or the Eligible Bidder's pseudo identity.

The ranking list is prepared in order of the Tariff, as the first ranking criteria, and the Net Worth of the Bidder, as the second ranking criteria.

For the sake of clarity:

- (a) The lowest Tariff across all Eligible Bidders will be ranked the highest, i.e., Rank 1 and so on; and
- (b) The second ranking criteria is used to break a tie resulting from the first ranking criteria (i.e., to decide inter-se ranking between two quotes at the same Tariff). A Bidder having a higher Net Worth is ranked higher.

If 2 (two) quotes at the same Tariff, are from Bidders who have the same Net Worth, then the ranking will be determined through a draw of lots.

### 19.4 **Identification of Best Quotes**

The lowest Tariff for the Project will be identified as the best quote (**Best Quote**). The Best Quote will be based on the ranking list prepared in accordance with Clause 19.3.

## **PART E. REVERSE AUCTION PROCESS**

### **20. REVERSE AUCTION PROCESS**

#### **20.1 Intimation of Date and Time of Reverse Auction**

MPUVNL shall, prior to the date of conducting the Reverse Auction Process, inform all the Eligible Bidders through e-mail regarding the date and time of the Reverse Auction Process and notifying them of being eligible to participate in the Reverse Auction Process.

Once the e-Reverse Auction window of the E-bidding Portal is configured, Eligible Bidders can log on to the E-bidding Portal and view salient aspects of the Reverse Auction window on the E-bidding Portal (e.g., Best Quote, minimum bid decrement value). Further, each Eligible Bidder would be able to see capacity for which that Eligible Bidder is qualified.

MPUVNL will also send a separate e-mail to all the Eligible Bidders notifying the start time of the Reverse Auction Process, along with the capacity for which such Eligible Bidder is qualified. Eligible Bidders will be able to login into the 'e-ReverseAuction Bidding Room' on the E-bidding Portal 15 (fifteen) minutes before the scheduled commencement time of the Reverse Auction Process.

#### **20.2 Process**

- (a) At the start of the Reverse Auction Process, the auction window of each Eligible Bidder will display the following information:
  - (i) the Best Quote, as identified in accordance with Clause 19.4 for the Project. It is clarified that the Best Quote for the Project will be displayed as the 'Start-Price' of that Project;
  - (ii) the latest tariff quoted by the Eligible Bidder; and
  - (iii) separate input spaces in which the Eligible Bidder can enter its new quote.
- (b) During the Reverse Auction Process, as the Eligible Bidders submit their bids, the auction window of each Eligible Bidder will display the then prevailing lowest Tariff and the list of all Eligible Bidders with the following details: pseudo identity and last quoted tariff.
- (c) It is clarified that at an Eligible Bidder can enter a Tariff only if such Tariff is lower than the then prevalent lowest Tariff for the Project. It is further clarified that no upward revision of the last quoted Tariff will be allowed.
- (d) From the commencement of the Reverse Auction Process, until the last quoted Tariff for the Project reaches a value which is 10% (ten percent) lower than the Best Quote (which will be referred to as 'Reserve-Price' on the auction screen on the E-bidding Portal), the decrement value will be a minimum of INR 0.01 (One Paisa) or multiples thereof. Once the lowest quoted Tariff for the Project reaches a value which is 10%

(ten percent) lower than the Best Quote, then the minimum decrement value will automatically change to INR 0.001 (0.1 Paisa) or multiples thereof.

For illustration, if the Best Quote is 300 Paisa, then an Eligible Bidder could submit its first bid during the Reverse Auction Process of a maximum value of 299 Paisa, or any other lower value such as 298 Paisa, 297 Paisa etc. However, once the last quoted Tariff reaches 270 Paisa (i.e., the value which is 10% (ten percent) lower than the Best Quote of 300 Paisa), then the minimum decrement value will automatically change to 0.10 Paisa for all the eligible bidders and then the next bid of the Bidder could be 269.9 Paisa or 269.8 or any other lower value.

It is clarified that the maximum decrement value allowed at any time during the Reverse Auction Process shall be INR 0.99 (Ninety-Nine Paisa).

- (e) The initial auction period will be of 1 (one) hour with a provision of auto extension by 10 (ten) minutes from the scheduled/extended closing time if a Tariff lower than the prevalent lowest Tariff is quoted by any Eligible Bidder in last 10 (ten) minutes of the reverse auction period or extended reverse auction period. If no such bid is received during the last 10 (ten) minutes of the reverse auction period or extended reverse auction period, the Reverse Auction Process will end.

### **20.3 Selection of Successful Bidders**

- (a) After the completion of the Reverse Auction Process, the Eligible Bidder with the last lowest quoted Tariff will be awarded the Project. If at the end of the Reverse Auction Process, no bids are received from any of the Eligible Bidders, the Eligible Bidder with the Best Quote, as identified in accordance with Clause 19.4, will be awarded the Project.
- (b) The Tariff at which the Project is awarded to the Eligible Bidder will be the Tariff applicable to the Project, in accordance with the Power Purchase Agreement.

### **20.4 Other terms and conditions applicable to Reverse Auction Process**

- (a) The Reverse Auction Process will be conducted by MPUVNL online and Bidders will participate in the Reverse Auction Process remotely from their respective locations. Bidders will be responsible to ensure uninterrupted and adequate internet connectivity during the Reverse Auction Process. Bidders are also required to acquaint themselves with other terms and conditions provided on the E-bidding Portal.
- (b) MPUVNL will not entertain or accept any request for extension of time during the Reverse Auction Process. Bidders are, therefore, requested to make all the necessary arrangements/ alternatives as may be required to ensure their successful participation in the Reverse Auction Process. Failure of power or loss of internet connectivity at the premises of Bidders during the Reverse Auction Process cannot be the cause for failure to participate in the Reverse Auction Process. MPUVNL shall not be responsible or liable for such eventualities.

- (c) Bidders are advised to ensure that they are fully trained and aware of the manner in which the E-bidding Portal operates and also clarify all their doubts regarding issues such as refreshing of screen, auction rules etc.
- (d) MPUVNL will not be liable to Bidders or any other party for any interruption or delay in access to the E-bidding Portal irrespective of the cause. In such cases, the decision of MPUVNL shall be binding on the Bidders.
- (e) Bidders should also note that:
  - (i) Although auto extension time is 10 (ten) minutes, there is a time lag between the actual placing of the bid on the local computer of the Bidder and the refreshing of the data on to the server for the visibility to MPUVNL. Considering the processing time for data exchange and the possible network congestion, Bidders must avoid last minute submission of Tariff during the Reverse Auction Process.
  - (ii) Technical and other non-commercial queries (not impacting price) can only be routed to the MPUVNL contact personnel indicated in the RFP.
  - (iii) Order finalization and post order activities such as issue of LOA, signing of the PPA etc. would be transacted directly between the Selected Bidder, MPUVNL and the Procurer.
  - (iv) LOA may be placed outside the E-bidding Portal and further processing of the LOA may also be outside the E-bidding Portal.
  - (v) In case of any technical problem faced by the Bidders during the Bidding Process, Bidders are advised to contact the person(s) mentioned in Schedule 2.
  - (vi) Bidders are advised to take training as scheduled by MPUVNL to avoid any confusion regarding the Bid Process.
  - (vii) MPUVNL will not be responsible for any computer configuration/java related issues, software/hardware related issues, telephone line glitches and breakdown/slow speed in internet connection of computer at Bidder's end.
  - (viii) Bidders may note that it may not be possible to extend any help, during the Reverse Auction Process, over phone or in person in relation to rectification of personal computer / internet / java related issues and Bidder may lose the chance of participation in the auction.

## **PART F. LOA AND SIGNING OF PPA**

### **21. LOA**

- 21.1 After determination of the Selected Bidder in accordance with Clause 20.3, MPUVNL will issue the LOA to the Selected Bidder in duplicate. The Selected Bidder will, within ten (ten) days of receipt of the LOA, sign and return, as acknowledgement, the duplicate copy of the LOA. If the duplicate copy of the LOA duly signed by the Selected Bidder is not received by the stipulated date, MPUVNL may, unless it consents to an extension, without prejudice to any of its rights under the Bid Documents or law, withdraw the LOA and forfeit the EMD of the Selected Bidder on account of failure of the Selected Bidder to acknowledge the LOA and exercise one of the rights available to it under Clause 25.2. MPUVNL will, no later than 90 (ninety) business days from the acceptance of LOA by the Selected Bidder, ensure the execution of PPA.

### **22. SIGNING OF PPA**

- 22.1 The Selected Bidder or its Affiliate, or the SPV formed by the Selected Bidder or its Affiliate, as the case may be, will execute the PPAs for the Project upon satisfying the following conditions:
- (a) sign and return, as acknowledgement, the duplicate copy of the LOA;
  - (b) submit the PBG(s), in accordance with the provisions of the relevant PPA(s); and
  - (c) submit the charter documents of the Selected Bidder, or the SPV formed by the Selected Bidder, as the case may be, including memorandum of association and articles of association, highlighting the object clause relating to power/electricity generation or developing renewable energy or the Project.

If the Selected Bidder fails to fulfil the above conditions set out in this Clause 22 within the timelines prescribed in the LOA, then MPUVNL may, unless it consents to an extension, without prejudice to any of its rights under the Bid Documents or law, withdraw the LOA and encash the EMD of the Selected Bidder on account of failure of the Selected Bidder to acknowledge the LOA, and exercise one of the rights available to it under Clause 25.2.

If the Selected Bidder fulfils the above conditions set out in this Clause 22 but fails to execute the PPA within the timelines stipulated by MPUVNL, then MPUVNL may, unless it consents to an extension, without prejudice to any of its rights under the Bid Documents or law, cancel the LOA and encash the EMD of the Selected Bidder on account of failure of the Selected Bidder to execute the PPA with the timelines stipulated by MPUVNL, and exercise one of the rights available to it under Clause 25.

Unless otherwise provided for in this RFP, the Selected Bidder will not be entitled to seek any deviation in the PPA.

The Selected Bidder will bear all costs associated with signing of all the PPA, including payment of any stamp duty, registration charges, etc. MPUVNL or Procurer will not be responsible or liable for any costs in relation to signing of the PPA.

## **PART G. MISCELLANEOUS**

### **23. BID DOCUMENTS**

- 23.1 The Bid Documents must be read as a whole. If any Bidder finds any ambiguity or lack of clarity in the Bid Documents, the Bidder must inform MPUVNL at the earliest. MPUVNL will then direct the Bidders regarding the interpretation of the Bid Documents.
- 23.2 The Bidders, after registering themselves on the E-bidding Portal in accordance with the procedure set out at Schedule 2, must download the Bid Documents from the E-bidding Portal. MPUVNL is not responsible for the completeness of the Bid Documents if they are not procured in accordance with this Clause 23.2.

#### **23.3 Document Cost**

The Bidders shall pay to MPUVNL a non-refundable Document Cost of INR 25,000 (Indian Rupees Twenty-Five Thousand Only) exclusive of applicable taxes. It is clarified that only the Bidders who have paid the Document Cost shall be provided access to the information and documents uploaded on the data room on the E-Bidding Portal. The Document Cost shall be paid to MPUVNL through NEFT/RTGS/IMPS in favour of Madhya Pradesh Urja Vikas Nigam Limited. The account details for NEFT/RTGS/IMPS are provided as hereunder:

Name of Payee: Madhya Pradesh Urja Vikas Nigam Limited  
Bank and Branch Details: ICICI Bank, Shivaji Nagar Branch Bhopal  
Account Number: 656501700049  
IFSC Code: ICIC0006565  
MPUVNL PAN No. (if applicable): AABCM1097M

After making the above payment, the Bidders shall also share the confirmation of payment along with organization ID on E-Bidding Portal, through e-mail on [resco4.mpuvn@gmail.com](mailto:resco4.mpuvn@gmail.com). The access shall be provided only after MPUVNL has received the confirmation of payment.

It is clarified that the Document Cost, set out in this Clause 23.3 above, is over and above the 'registration fee' payable online by the Bidders to ISN-ETS, in accordance with Clause 2.2.

- 23.4 Subject to the provisions of Clause 23.5 below, this RFP is not transferable.
- 23.5 An authorised user of the Bidder (and of the Lead Member, in case of a Consortium) should register on the E-bidding Portal and such authorised user should download the RFP. It is important to note that only the authorized user should submit the Bids.

In case of a Consortium, if it is required by the Lead Member to involve a user of one of the Member of the Consortium for any of the activities on the E-bidding Portal, then the concerned user of the Lead Member can create a 'User Profile' on the E-bidding Portal of such user of the Member of the Consortium.

### **24. ACKNOWLEDGEMENT BY BIDDER**

- 24.1 It shall be deemed that by submitting a Bid, the Bidder has:

- (a) made a complete and careful examination of the Bid Documents (including all instructions, forms, terms and specifications) and any other information provided by MPUVNL in the Bid Documents or pursuant to this RFP and that the Bidder acknowledges that its submission of a Bid that is not substantially responsive to the RFP in any respect will be at the Bidder's risk and may result in rejection of the Bid;
- (b) received all relevant information requested from MPUVNL;
- (c) accepted the risk of inadequacy, error or mistake in the information provided in the Bid Documents or furnished by or on behalf of MPUVNL;
- (d) satisfied itself about all things, matters and information, necessary and required for submitting an informed Bid, for the development of the Project and performance of its obligations under the PPA;
- (e) acknowledged and agreed that inadequacy, lack of completeness or incorrectness of information provided in the Bid Documents or ignorance of any matter in relation to the Project shall not be a basis for any claim for compensation, damages, extension of time for performance of its obligations or loss of profits or revenue from MPUVNL, or a ground for termination of the PPA;
- (f) agreed to be bound by the undertakings provided by it under and in terms of this RFP and the PPA and comply with the "Approved Models and Manufacturers of Solar Photovoltaic Modules (Requirement of Compulsory Registration) Order, 2019-Implementation-Reg" and its subsequent amendments and clarifications. The Selected Bidder must ensure that the modules procured for the Project should have been included in the ALMM list-I valid on the date of invoicing of such modules;
- (g) read and understood the office memorandum number 283/3/2018-GRID SOLAR dated 9 March 2021 issued by MNRE through which it has notified the imposition of basic customs duty on solar modules and solar cells with effect from 1 April 2022. The Bidder has acknowledged and has taken due cognizance of the basic custom duty trajectory specified under the abovementioned office memorandum while submitting the Bid. It is clarified that the imposition of basic customs duty through the abovementioned office memorandum will not be construed as a change in law event for this Project; and
- (h) acknowledged and agreed to be bound by the Office Memorandum (*defined in the definition section*) and its subsequent amendments and clarifications.

## **25. RIGHTS OF MPUVNL**

25.1 MPUVNL, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, to:

- (a) suspend the Bid Process and/or amend and/or supplement the Bid Process or modify the dates or other terms and conditions relating thereto;



- (b) consult with any Bidder in order to receive clarification or further information, including information and evidence regarding its continued eligibility and compliance with the Financial Capacity requirement at any stage of the Bid Process;
- (c) retain any information, documents and/or evidence submitted to MPUVNL by and/or on behalf of any Bidder;
- (d) independently verify, disqualify, reject and/or accept any and all documents, information and/or evidence submitted by or on behalf of any Bidder;
- (e) reject a Bid, if:
  - (i) at any time, a material misrepresentation or incorrect or false information is made or uncovered;
  - (ii) the Bidder in question does not provide, within the time specified by MPUVNL, the supplemental information sought by MPUVNL for evaluation of the Bid; or
  - (iii) the Bid does not meet the validity requirement as set out in Clause 13.1 of the RFP; or
- (f) accept or reject a Bid, annul the Bid Process and reject all Bids, at any time, without any liability or any obligation for such acceptance, rejection or annulment and without assigning any reasons whatsoever to any Person, including the Bidders. If MPUVNL annuls the Bid Process and rejects all Bids, it may, in its sole discretion, invite fresh Bids from all the Qualified Bidders.

25.2 If MPUVNL exercises its right under the Bid Documents to reject a Bid and consequently an Eligible Bidder which, during the Reverse Auction Process, quoted the lowest Tariff for the Project gets disqualified or rejected, then MPUVNL reserves the right to take any such measure as may be deemed fit in the sole discretion of MPUVNL, including the following:

- (a) Giving opportunity to L2 to take up the work at L1 rate for concerned Project(s). On refusal by L2 to match L-1 rate, opportunity would be given to L3 to take up the same. This process would continue for subsequent Bidder(s) as per the above modality. Such Bidder(s) would be treated as Selected Bidder(s), upon whom relevant provisions of RFP and PPA would be applicable.
- (b) annulling the Bid Process.

25.3 If it is discovered during the Bid Process, at any time before signing the PPA or after their execution and while they are in force, that the Financial Capacity requirement has not been met by a Bidder or a Bidder has made misrepresentation or has given any incorrect or false information, then:

- (a) such Bidder shall be disqualified forthwith, if not declared as the Selected Bidder by the issuance of the LOA; or

- (b) the LOA shall be liable to be cancelled or the PPA shall be liable to be terminated forthwith if such Bidder has been declared as the Selected Bidder. MPUVNL shall not be liable in any manner whatsoever to such Bidder for such cancellation or termination.

MPUVNL will have the right to forfeit the EMD, and if after the execution of the PPA the Procurer shall have the right to forfeit and appropriate the PBG, as a mutually agreed genuine pre-estimate of the loss suffered by MPUVNL or Procurer, as the case may be, for, amongst others, MPUVNL's or the Procurer time, cost and efforts. Such forfeiture will be without prejudice to any other right or remedy that MPUVNL may have under the Bid Documents and the Procurer may have under the PPA or applicable law.

## **26. CORRESPONDENCE WITH BIDDERS**

Save as expressly provided in these Bid Documents, MPUVNL will not entertain any correspondence with the Bidders, whether in connection with the acceptance or rejection of their Bids or otherwise.

## **27. CONFIDENTIAL INFORMATION AND PROPRIETARY DATA**

### **27.1 Proprietary Data**

All documents and other information provided by MPUVNL or submitted by a Bidder to MPUVNL will remain or become the property of MPUVNL. Bidders are required to treat all information provided by MPUVNL in the RFP and other Bid Documents as strictly confidential and not to use them for any purpose other than for preparation and submission of their Bids.

### **27.2 Confidentiality Obligations of MPUVNL**

MPUVNL will treat all information, submitted as part of a Bid as confidential and will require all those who have access to such material to treat it in confidence. MPUVNL may not divulge any such information or any information relating to the evaluation of the Bids or the Bid Process, unless:

- (a) such publication is contemplated under these Bid Documents; or
- (b) such publication or disclosure is made to any Person who is officially concerned with the Bid Process or is a retained professional advisor advising MPUVNL or the Bidder on matters arising out of or concerning the Bid Process; or
- (c) such publication is made for promoting the Project, including the names of Bidders that participated in the Bid Process and the Tariff quoted by them; or
- (d) it is directed to do so by any statutory authority that has the power under law to require its disclosure; or
- (e) such publication is to enforce or assert any right or privilege of the statutory authority and/or MPUVNL or as may be required by law (including under the Right to Information Act, 2005); or
- (f) in connection with any legal process.

## 28. FRAUD AND CORRUPT PRACTICES

- 28.1 Bidders and their respective officers, employees, agents and advisors are required to observe the highest standards of ethics during the Bid Process. Notwithstanding anything to the contrary contained in this RFP, MPUVNL may reject a Bid without being liable in any manner whatsoever to the Bidder, if it determines that a Bidder has, directly or indirectly or through an agent, engaged in a corrupt, fraudulent, coercive, undesirable or restrictive practice in or affecting the Bid Process.
- 28.2 Without prejudice to the rights of MPUVNL under Clause 28.1 above, if a Bidder is found by MPUVNL to have directly or indirectly or through an officer, employee, agent or advisor engaged or indulged in any corrupt, fraudulent, coercive, undesirable or restrictive practice during the Bid Process, such Bidder will not be eligible to participate in any tender or request for proposal issued by the GoMP or any of its ministries, state operated enterprises or undertakings, either indefinitely or for a period of time specified by the GoMP, from the date such Bidder is found by MPUVNL to have directly or indirectly or through an officer, employee, agent or advisor engaged or indulged in any of the activities mentioned above.
- 28.3 For the purposes of this Clause 28, the following terms will have the meanings given to them below:
- (a) **corrupt practice** means:
- (i) offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the actions of any Person connected with the Bid Process (for avoidance of doubt, offering of employment to, or employing, or engaging in any manner whatsoever, directly or indirectly, any official of the GoMP or MPUVNL who is or has been associated in any manner, directly or indirectly, Project with the Bid Process or has dealt with matters concerning the Project or arising from it, before or after its execution, at any time prior to the expiry of 1 (one) year from the date that such official resigns or retires from or otherwise ceases to be in the service of the GoMP or MPUVNL, will be deemed to constitute influencing the actions of a Person connected with the Bid Process); or
  - (ii) appointing or engaging in any manner whatsoever, whether during or after the Bid Process or after the execution of all the PPA, as the case may be, any Person in respect of any matter relating to the Project, the Bid Process or any of the PPA, who at any time has been or is a directly or indirectly appointed legal, financial or technical advisor of the GoMP or MPUVNL on any matter concerning the Project.

For the avoidance of doubt, this restriction shall not apply where such adviser was engaged by the Bidder or any of its Associate/Affiliate in the past but its assignment expired or was terminated at least 18 (eighteen) months prior to the date of issue of the RFP. Nor will this restriction apply where such adviser is engaged after a period of 2 (two) years from the date of signing of all the PPA;

- (b) **fraudulent practice** means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a Person to obtain a financial or any other benefit or to avoid an obligation;
- (c) **coercive practice** means impairing or harming, or threatening to impair or harm, directly or indirectly, any Person or the property of the Person to influence improperly the actions of a Person;
- (d) **undesirable practice** means: (i) establishing contact with any Person connected or employed or engaged by MPUVNL with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bid Process; or (ii) having a Conflict of Interest, as defined in the RFP; and
- (e) **restrictive practice** means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating full and fair competition in the Bid Process.

## **29. GOVERNING LAW AND JURISDICTION**

### **29.1 Governing Law**

The Bid Process, the Bid Documents and the Bids shall be governed by, and construed in accordance with, the laws of India.

### **29.2 Exclusive Jurisdiction**

The competent courts at Bhopal shall have exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with the Bid Process and the RFP.

## SCHEDULE 1

### SCHEDULE OF BID PROCESS

MPUVNL shall endeavor to adhere to the following schedule to conduct the Bid Process:

S. No.	Event Description	Dates for the Project	Timing (Hrs.)
1	Start of registration, downloading of the RFP, access to Data Room	19.02.2025	-
2	Pre-Bid Meeting 1	25.02.2025	-
3	Last date for receiving written queries from Bidders	01.03.2025	-
4	Response to queries	05.03.2025	-
5	Pre-Bid Meeting 2	10.03.2025	-
6	Last date for receiving written queries from Bidders	12.03.2025	-
7	Response to queries	09.04.2025	18:00
8	Last date of registration	29.04.2025	17:00
9	Proposal Due Date	29.04.2025	18:00
10	Hard Copy submission of Bid Document	01.05.2025	18:00
11	Qualification Proposal Opening	05.05.2025	14:00
12	Financial Proposal Opening	16.05.2025	17:00

*Note:*

- 1. The timings for some of the above-mentioned events/deadlines will be displayed on the ETS Portal. The timings for events not displayed on the portal shall be communicated separately.*
- 2. Date and Time of Reverse Auction Process, Issuance of LOA and Signing of PPA shall be communicated separately.*

## SCHEDULE 2

### E-BIDDING PORTAL

#### (Special Instructions to Bidders specific to E-Bidding Portal)

#### 1. General

The information set out in this Schedule 2 regarding e-bidding supplements the information provided in Section II of the RFP. For participating in the Bid Process online, it is recommended that Bidders should carefully read the instructions set out in this Schedule 2.

For conducting e-bidding (or electronic tendering), MPUVNL has decided to use the portal <https://www.bharat-electronictender.com>, through ISN-ETS. This portal is based on a 'secure' and 'user friendly' software from ElectronicTender®, also referred to as ElectronicTenderSystem® (ETS).

The instructions in this Schedule 2 are supplemented with more detailed guidelines on the relevant screens of the ETS.

#### 2. E-Bidding Methodology

Sealed Bid System: Single-Stage Two Envelope

Auction: The sealed bid system would be followed by an 'e-Reverse Auction'

#### 3. Broad Outline of Activities from Bidder's Perspective:

- (a) Procure a Class- III Digital Signing Certificate (DSC).
- (b) Register on ElectronicTenderSystem® (ETS) (i.e., <https://www.bharat-electronictender.com>).
- (c) Create Marketing Authorities (MAs), Users and assign roles on ETS. It is mandatory to create at least one MA.
- (d) View Notice Inviting Tender (NIT) on ETS.
- (e) For this tender - assign Tender Search Code (TSC) to a MA.
- (f) Download official copy of Bid Documents from ETS. Note: Official copy of Bid Documents is distinct from downloading 'Free Copy of Bid Documents'. To participate in a tender, it is mandatory to procure official copy of Bid Documents for that tender.
- (g) Clarification to Bid Documents on ETS.
  - Query to MPUVNL (Optional);
  - View response to queries posted by MPUVNL.
- (h) Bid-Submission on ETS.

- (i) Attend Public Online Tender Opening Event (TOE) on ETS - Opening of relevant Bid-Part (Qualification/ Technical-Part).
- (j) Post-TOE (i.e., Post Qualification/ Technical-Part) Clarification on ETS (Optional) - Respond to MPUVNL Post-TOE queries.
- (k) Attend Public Online Tender Opening Event (TOE) on ETS - Opening of relevant Bid-Part (i.e., Financial-Part).
- (l) Post-TOE (i.e., Post Financial-Part) Clarification on ETS (Optional) - Respond to MPUVNL Post-TOE queries.
- (m) Participate in e-ReverseAuction on ETS if determined to be 'Eligible' in accordance with the provisions of the RFP.

#### **4. Digital Certificates**

For integrity of data and authenticity/ non-repudiation of electronic records, and to be compliant with IT Act 2000, it is necessary for each user to have a Digital Certificate (DC), also referred to as Digital Signature Certificate (DSC), of Class - III, issued by a Certifying Authority (CA) licensed by Controller of Certifying Authorities (CCA). Please also refer to CCA's website (<http://www.cca.gov.in>) for further information in this regard.

#### **5. Registration**

To use the ElectronicTender® portal <https://www.bharat-electronictender.com>, vendors need to register on the portal. If the Bidder already has a valid registration from his prior use of ETS, then the Bidder does not need to make any further tender specific registration. Registration of each organization is to be done by one of its senior persons who will be the main person coordinating for the e-tendering activities. In ETS terminology, this person will be referred to as the Super User (SU) of that organization. For further details, please visit the E-Bidding website/portal, and click on the 'Supplier Organization/Bidder' link under 'Registration' (on the Home Page), and follow further instructions as given on the E-Bidding Portal. Bidders are also required to pay the requisite annual registration fee to ISN-ETS for registering on the E-Bidding Portal (in this regard, please see Clause 2.2 of the RFP).

After successful submission of registration details and Annual Registration Fee, please contact ETI/ ETS Helpdesk (as given below), to get your registration accepted/activated.

#### **6. Important Note**

- (a) Suppliers/ Bidders interested in participating in the Bid Process must download the official copy of the RFP and other Bid Documents after login into the E-bidding Portal by using the login ID and password created during the registration process.
- (b) An authorised user of the Lead Member of a Consortium should register on the E-Bidding Portal and the concerned authorised user of the Lead Member should download the Official Copy of the RFP (i.e., Tender Documents). It is important to note that only an authorized user of the Lead Member should submit the Bids. If it is required by the Lead Member to involve a user of one of the Consortium Members for any the activities on the E-Bidding Portal, then the concerned user of the Lead Member

can create a User Profile of such user of the Consortium Member. For any help in this regard kindly contact ISN-ETS /ETS Helpdesk. Only if the Bidder is not satisfied with the response from ISN-ETS, the Bidder may contact MPUVNL.

<b>ISN-ETS/ETS Helpdesk</b>	
<b>Telephone/ Mobile</b>	Customer Support: +91-124-4229071/ 72 From Monday to Friday from 10 AM to 6 PM (except Government Holiday)  Emergency Contact Number: +91-8287663763
<b>E-mail ID</b>	support@isn-ets.com

<b>MPUVNL's Contact</b>	
<b>Contact Person</b>	Mr. Ajay Shukla, Executive Engineer Mr. Saurabh Sachan, Assistant Engineer
<b>Telephone/ Mobile</b>	+91-755-2553595 [between 10:00 hrs to 18:00 hrs on working days]
<b>E-mail ID</b>	resco4.mpuvn@gmail.com saurabh.sachan@mp.gov.in

- (c) To minimize teething problems during the use of ETS (including the registration process), it is recommended that the Bidder should review the instructions given under 'ETS User-Guidance Center' located on the ETS Home Page, including instructions for timely registration on ETS. The instructions relating to 'Essential Computer Security Settings for Use of ETS' and 'Important Functionality Checks' should be especially taken into cognizance.
- (d) Please note that even after acceptance of Bidder's registration by ISN-ETS, to respond to a tender you will also require time to complete activities related to Bidder's organization, such as creation of users, assigning roles to them, etc.

## 7. Some bidding related information for this tender (Sealed Bid)

The entire bid-submission would be online on ETS. Broad outline of submissions are as follows:

- Submission of Bid-Parts/ Envelopes:
  - Envelope I Technical Part [Qualification Proposal as mentioned in Clause 15.1(a)];



- Envelope II Financial Part [Financial Proposal as mentioned in Clause 15.1 (b)];
- Submission of digitally signed copy of Bid Documents/ Addendum.

## 8. General Help for Bid-Preparation and Bid-Submission

Bid Submission in ETS has comprehensive facilities which allow duly authorized users of a Bidder organization to prepare and submit bids in a highly secure manner.

Depending upon the instructions of the Buyer organization, Bid Submission would typically consist of submissions as outlined below.

- Digitally Signed and Encrypted Bid-Parts (or Bid-Envelopes, viz, Qualification/ Technical-Part, Financial-Part). Each Bid-Part would consist of the following:

- ElectronicForms: For each Bid-Part, the Bidder would be required to submit bid-summary of the tender in innovatively built, tender-specific 'ElectronicForms'. The Bidder should fill in various sections of the ElectronicForms, encrypt the data with ElectronicEncrypter™ in a highly secure manner, and submit it to ETS. After all sections are filled, the Bidder should preview the filled ElectronicForm, digitally sign the content, and submit the ElectronicForm.
- Main-Bid (Mandatory): Once the ElectronicForm for a Bid-Part is digitally signed and submitted, the bidder can encrypt the corresponding 'Main-Bid' (i.e., a single file containing 'sensitive details' of that Bid-Part) with ElectronicEncrypter™ in a highly secure manner, digitally sign and upload the encrypted 'Main-Bid' to ETS. Maximum file size of 'Main-Bid' on this e-procurement portal is 10 MB. File formats allowed for 'Main-Bid' are -- .ZIP, .DOC, .DOCX, .XLS, .XLSX, .PDF, .DWF.

NOTE: If multiple documents are to be submitted as part of 'Main-Bid', then these documents should be zipped into a single file (one method of doing this would be to keep all required documents in a folder and zipping the folder). This single zip file will then constitute the 'Main-Bid'.

- Bid-Annexures (Optional): Multiple digitally signed 'Bid-Annexures' ('Certificates', and other 'non-sensitive' information, et al) can be uploaded for each Bid-Part, as required. Maximum file size of 'Bid-Annexure' on this e-procurement portal is 10 MB. File formats allowed for 'Bid-Annexure' are -- .DOC, .DOCX, .XLS, .XLSX, .PDF, .DWF.

IMPORTANT: All Bid-Annexures of a Bid-Part should be uploaded prior to submission of Main Bid of that Bid-Part.

- Digitally signed copy of Tender Documents & Addenda

Once all the mandatory steps of Bid Submissions on ETS are completed the system shows the Overall Status of Bid Submission as 'Complete'.

Furthermore, after submission of the 'Original' Bids, ETS has a unique facility of allowing submission of 'Supplementary Bids' (e.g., Modification, Substitution). The process would be similar to the corresponding 'Original Bid' submission. In addition, facility is also provided in ETS to 'Withdraw a Bid'.

**IMPORTANT:** It is the responsibility of each Bidder to remember and securely store the Pass-Phrase for each Bid-Part submitted by that Bidder. In the event of a Bidder forgetting the Pass-Phrase before the expiry of deadline for Bid-Submission, facility is provided to the Bidder to 'Annul Previous Submission' from the Bid-Submission Overview page and start afresh with new Pass-Phrase(s).

## **9. Special Note on Security and Transparency of Bids**

Security related functionality has been rigorously implemented in ETS in a multi-dimensional manner. Starting with 'Acceptance of Registration' by ISN-ETS, provision for security has been made at various stages in ElectronicTender's software. Specifically, for Bid Submission, some security related aspects are outlined below:

As part of the ElectronicEncrypter™ functionality, the contents of both the 'ElectronicForms' and the 'Main-Bid' are securely encrypted using a Pass-Phrase created by the Bidder himself. Unlike a 'password', a Pass-Phrase can be a multi-word sentence with spaces between words (e.g., I love this World). A Pass-Phrase is easier to remember, and more difficult to break. It is mandatory that a separate Pass-Phrase be created for each Bid-Part. This method of bid-encryption does not have the security and data-integrity related vulnerabilities which are inherent in e-tendering systems which use Public-Key of the specified officer of a Buyer organization for bid-encryption. Bid-encryption in ETS is such that the Bids (Qualification Proposal or Financial Proposal) cannot be decrypted before the Public Online Tender Opening Event (TOE), even if there is connivance between the concerned tender-opening officers of the Buyer organization and the personnel of E-Bidding Portal.

**CAUTION:** All Bidders must fill ElectronicForms for each bid-part sincerely and carefully and avoid any discrepancy between information given in the ElectronicForms and the corresponding Main-Bid. For transparency, the information submitted by a Bidder in the ElectronicForms is made available to other Bidders during the Online Public TOE. If it is found during the Online Public TOE that a Bidder has not filled in the complete information in the ElectronicForms, the relevant official responsible for online Public TOE (i.e., TOE officer) may make available for downloading the corresponding Main-Bid of that Bidder at the risk of the Bidder. Subject to Clause 15.1(b), if variation is noted between the information contained in the ElectronicForms and the 'Main-Bid', the contents of the ElectronicForms shall prevail. In case of any discrepancy between the values mentioned in figures and in words, the value mentioned in words will prevail.

Additionally, the Bidder shall make sure that each Pass-Phrase to decrypt the relevant Bid-Part is submitted in accordance with Clause 15.

There is an additional protection with SSL/TLS Encryption during transit from the client-end computer of a Bidder organization to the E-Bidding portal.

## **10. Public Online Tender Opening Event (TOE)**

ETS offers a unique facility for ‘Public Online Tender Opening Event (TOE)’. Tender Opening Officers, as well as authorized representatives of Bidders can simultaneously attend the Public Online Tender Opening Event (TOE) from the comfort of their offices. Alternatively, one/ two duly authorized representative(s) of Bidders (i.e., Supplier organization) are requested to carry a Laptop with Wireless Internet Connectivity, if they wish to come to MPUVNL's office for the Public Online TOE.

Every legal requirement for a transparent and secure ‘Public Online Tender Opening Event (TOE)’, including digital counter-signing of each opened bid by the authorized TOE-officer(s) in the simultaneous online presence of the participating Bidders’ representatives, has been implemented on ETS.

As soon as a Bid is decrypted with the corresponding ‘Pass-Phrase’ as submitted by the Bidder himself during the TOE itself or as per alternative methods prescribed in the Tender Documents, salient points of the Bids (as identified by the Buyer organization) are simultaneously made available for downloading by all participating Bidders. The tedium of taking notes during a manual ‘Tender Opening Event’ is therefore replaced with this superior and convenient form of ‘Public Online Tender Opening Event (TOE)’.

ETS has a unique facility of ‘Online Comparison Chart’ which is dynamically updated as each online bid is opened. The format of the chart is based on inputs provided by the Buyer for each Bid-Part of a tender. The information in the Comparison Chart is based on the data submitted by the Bidders. A detailed Technical and/ or Financial Comparison Chart enhances Transparency. Detailed instructions are given on relevant screens.

ETS has a unique facility of a detailed report titled ‘Minutes of Online Tender Opening Event (TOE)’ covering all important activities of ‘Online Tender Opening Event (TOE)’. This is available to all participating Bidders for ‘Viewing/ Downloading’.

#### **11. Some Bidding related Information for e-Reverse Auction (Reverse Auction Process)**

Online Reverse Auction Process will be conducted after determining Eligible Bidders in accordance with Clause 19.2. The following would be parameters for e-Reverse Auction (i.e., Reverse Auction Process):

<b>S. No</b>	<b>Parameter</b>	<b>Value</b>
1	Date and Time of Reverse-Auction Bidding Event	Please refer to Schedule 1
2	Duration of Reverse-Auction Bidding Event	1 (one) hour Please refer to Clause 20.2(e)
3	Automatic extension of the ‘Reverse-Auction Closing Time’, if last bid received is within a ‘Pre-defined	Yes Please refer to Clause 20.2(e)

S. No	Parameter	Value
	Time-Duration' before the 'Reverse-Auction Closing Time'	
3.1	Pre-defined Time-Duration	Within last 10 (ten) minutes Please refer to Clause 20.2(e)
3.2	Automatic extension Time-Duration	10 (ten) minutes Please refer to Clause 20.2(e)
3.3	Maximum number of Auto-Extension	Unlimited extensions Please refer to Clause 20.2(e)
4	Criteria of Bid-Acceptance	Please refer to Clause 20.2
5	Entity – Start-Price	Best Quote as mentioned in Clause 19.4
6	Entity – Reserve-Price	Reserve-Price would be the price which is 10% (ten percent) less than the Best Quotes (i.e., Start-Price) as mentioned in Clause 20.2(d)
7	Minimum Bid-Decrement	1.00 Paisa.  After Reserve-Price is achieved 0.10 Paisa  (Note: Bidder can always submit higher values of decrement)  Minimum Bid-Decrement applicable on 'Start-Price' and after the 'Reserve-Price' has been met as mentioned in Clause 20.2(d)

## 12. Other Instructions

For further instructions, Bidders should visit the home-page of the E-bidding Portal (i.e., <https://www.bharat-electronictender.com>), and go to the **User-Guidance Center**.

The help information provided through 'ETS User-Guidance Center' is available in three categories: (a) Users intending to Register/First-Time Users; (b) Logged-in users of Buyer organizations; and (c) Logged-in users of Bidder organizations. Various links (including links for User Manuals) are provided under each of the three categories.

**Important Note:** It is strongly recommended that all authorized users of supplier organizations should thoroughly peruse the information provided under the relevant links and take appropriate action. This will prevent hiccups and minimize teething problems during the use of ETS.

### 13. Seven Critical Do's and Don'ts for Bidders

Specifically for supplier organizations, the following “**six Key Instructions for Bidders**” must be assiduously adhered to:

- (a) Obtain individual Digital Signing Certificate (DSC or DC) of Class-III, well in advance of your first tender submission deadline on ETS.
- (b) Register your organization on ETS well in advance of the important deadlines for your first tender on ETS viz ‘Date and Time of Closure of Procurement of Tender Documents’ and ‘Last Date and Time of Receipt of Bids’. Please note that even after acceptance of your registration by the Service Provider, to respond to a tender you will also require time to complete activities related to your organization, such as creation of - Marketing Authority (**MA**) (i.e., a department within the Supplier Organization/ Bidder responsible for responding to tenders), users for one or more such MAs, assigning roles to them, etc. It is mandatory to create at least one MA. This unique feature of creating an MA enhances security and accountability within the Bidder.
- (c) Get your organization's concerned executives trained on ISN-ETS well in advance of your first tender submission deadline on ISN-ETS.
- (d) For responding to any particular tender, the tender (i.e., its Tender Search Code or TSC) has to be assigned to an MA. Further, an ‘Official Copy of Tender Documents’ should be procured/ downloaded before the expiry of date and time of closure of Procurement of Tender Documents. Note: Official copy of Bid Documents is distinct from downloading ‘Free Copy of Bid Documents’. Official copy of Tender Documents is the equivalent of procuring physical copy of Bid Documents with official receipt in the paper-based manual tendering system.
- (e) Submit your bids well in advance of tender submission deadline on ISN-ETS (There could be last minute problems due to internet timeout, breakdown, et. al.).
- (f) It is the responsibility of each Bidder to remember and securely store the Pass-Phrase for each Bid-Part submitted by that Bidder. In the event of a Bidder forgetting the Pass-Phrase before the expiry of deadline for Bid-Submission, facility is provided to the bidder to ‘Annul Previous Submission’ from the Bid-Submission Overview page and start afresh with new Pass-Phrase(s).
- (g) ISN-ETS will make your bid available for opening during the Online Public Tender Opening Event (TOE) ‘ONLY IF’ your ‘Status pertaining Overall Bid-Submission’ is

‘Complete’. For your record, you can generate and save a copy of ‘Final Submission Receipt’. This receipt can be generated from 'Bid-Submission Overview Page' only if the ‘Status pertaining overall Bid-Submission’ is ‘Complete’.

**NOTE:**

*While the first 3 (three) instructions mentioned above are especially relevant to first-time users of ISN-ETS, the fourth, fifth, sixth and seventh instructions are relevant at all times.*

**Additional DO’S AND DON’TS for Bidders Participating in e-Reverse Auction**

- (a) Get your organization's concerned executives trained for ‘e-ReverseAuction’ related processes on ETS well in advance of the start of ‘e-ReverseAuction’.
- (b) For responding to any particular ‘e-ReverseAuction’, the ‘e-ReverseAuction’ (i.e., its Reverse Auction Search Code or RASC) has to be assigned to an MA.
- (c) It is important for each bidder to thoroughly read the ‘rules and related criterion’ for the ‘e-ReverseAuction’ as defined by the Buyer organization.
- (d) If applicable for an ‘e-ReverseAuction’ (such as in case of a Direct e-ReverseAuction which is not preceded by a sealed-bid stage), pay the bid processing fee, if any, well in advance of the start of ‘e-ReverseAuction’ bidding.
- (e) It is important to digitally-sign your ‘Final bid’ after the end of ‘e-ReverseAuction’ bidding event.

**Minimum Requirements at Bidder's End**

- Computer System having configuration with minimum Windows 7 or above, and
- Broadband connectivity
- Microsoft Internet Explorer 7.0 or above
- Digital Signing Certificate(s) – Class-III

**Vendors Training Program**

MPUVNL, in coordination with the ISN-ETS, will share the training schedule for the training of the authorized representatives of the Bidders, in due course. ISN-ETS will charge INR 5,000 (Indian Rupees Five Thousand) plus applicable taxes for each executive of the Bidder attending the training programme, which will have to be paid by the Bidders directly to ISN-ETS, as per ISN-ETS’s terms and conditions. All other necessary instructions will be communicated on the E-bidding Portal.

The authorized representative(s) of Bidders who wish to attend the training program are requested to carry a laptop with wireless internet connectivity, and Class-III Digital Signing Certificate (DSC).

## ANNEX 1

### LETTER OF BID

*(To be printed on the letterhead of the Bidder/Lead Member)*

Dated:

Reference No. \_\_\_\_\_

From: \_\_\_\_\_ *(Insert name and address of the Bidder/Lead Member)*

\_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail address: \_\_\_\_\_

To,  
Managing Director,  
Madhya Pradesh Urja Vikas Nigam Limited,  
Urja Bhawan  
Link Road Number 2,  
Shivaji Nagar, Bhopal,  
Madhya Pradesh,  
India - 462016

**Sub: Response to RFP No: [●] dated [●] for Development of Cumulative [●] kW of Grid-Connected Rooftop Solar PV Systems to be set up at Identified Government Premises in the District of the Madhya Pradesh**

Dear Sir/Madam,

With reference to your RFP dated [●], we, having read and examined in detail the Bid Documents and the terms of the PPA, and having understood their contents, hereby submit our Qualification Proposal. The Qualification Proposal is unconditional and unqualified and valid for 180 (one hundred and eighty) days from the Proposal Due Date.

1. We give our unconditional acceptance to the Bid Documents issued by MPUVNL. In token of our acceptance to the Bid Documents, the same have been initialed by us and enclosed with our Qualification Proposal. We confirm and undertake that we shall sign and execute the PPA as per the provisions of the RFP, without seeking any deviations or amendments, and the provisions of the PPA shall be binding on us.
2. We acknowledge that MPUVNL will be relying on the information provided in the Bid and the documents accompanying the Qualification Proposal for selection of the Bidders for awarding the Project, and we certify that all information provided in the Qualification Proposal and in the Annexes is true and correct; nothing has been omitted which renders such information misleading; and all documents accompanying the Qualification Proposal are true copies of their respective originals. In the event that any of the information provided in the Qualification Proposal is found to be incorrect after our selection as the Selected Bidder, we agree that the

same would be treated as an event of default under the PPA, and the Procurer shall have the right to terminate the PPA.

3. We hereby unconditionally and irrevocably agree and accept that the decision made by MPUVNL in respect of any matter regarding or arising out of this RFP shall be binding on us. We hereby expressly waive any and all claims in respect of this process.
4. The statements in this letter are made for the express purpose of qualifying for participation in the Reverse Auction Process and selection as the Selected Bidder for the development, operation and maintenance of the Project and we are enclosing herewith our response to the RFP with formats duly digitally signed as desired by you in accordance with the RFP, for your consideration.
5. We confirm that we have studied the provisions of the relevant Indian laws and regulations as required to enable us to submit our Bid and execute the PPA for the development, operation and maintenance of the Project in the event of our selection as the Selected Bidder.
6. We hereby understand and confirm that MPUVNL reserves the right, at any time, to verify the documents furnished by us, including availability of the Net Worth to the extent claimed in the Qualification Proposal with the original documents and bank statements and the shareholding of the Company/ LLPs/ Sole Proprietor/ Partnership Firm along with a copy of complete documentary evidence supported with originals at any stage from evaluation up to the expiry of the PPA. Further, we shall make available to MPUVNL any additional information it may find necessary or require to supplement or authenticate the Bid.
7. We confirm that we shall submit, before signing the PPA, the unaudited balance sheet of the previous month end along with complete bank statement starting from the date of submission of the Qualification Proposal along with a copy of the documents submitted with Registrar of Companies/ relevant authorities which became due during this period. We understand and confirm that if the aforesaid documents furnished by us are found to be misleading or misrepresenting in any way, MPUVNL shall be free to take appropriate action including invocation of the EMD.
8. We acknowledge the right of MPUVNL to reject our Bid without assigning any reason or otherwise and we hereby waive, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.
9. We represent, warrant and undertake that:
  - (a) we have examined and have no reservations to the Bid Documents and do not seek any deviations to the Bid Documents issued by MPUVNL;
  - (b) we have not directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as defined in Clause 28 of the RFP, in respect of any tender or request for proposal issued by or any agreement entered into with MPUVNL or any other public sector enterprise or any government, Central or State;
  - (c) we have taken steps to ensure that in conformity with the provisions of Clause 28 of the RFP, no Person acting for us or on our behalf has engaged or will engage in any



corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice;

- (d) the Bid Documents and all other information provided by MPUVNL are and shall remain the property of MPUVNL and are provided to us solely for the purpose of preparation and the submission of our Bid in accordance with the RFP. We undertake that we shall treat all information received from or on behalf of MPUVNL as strictly confidential and we shall not use such information for any purpose other than for preparation and submission of our Bid;
- (e) we, [including the Members of the Consortium] or our Associate/Affiliate, and our directors and the directors of [the Members of the Consortium] or our Associate/Affiliate whose financial credentials have been relied on by the Bidder (either wholly or in part for demonstrating its Financial Capacity) have not been barred or blacklisted by any government agency or authority in India, the government of the jurisdiction where we, [the Members of the Consortium] or our Associate/Affiliate whose financial credentials have been relied on by the Bidder (either wholly or in part for demonstrating its Financial Capacity) are incorporated or the jurisdiction of our principal place of business, any international financial institution such as the World Bank Group, Asian Development Bank, African Development Bank, Inter-American Development Bank, Asian Infrastructure Investment Bank etc., or the United Nations or any of its agencies from participating in any project or being awarded any contract as of the date of submission of our Qualification Proposal;
- (f) [we, [including the Members of the Consortium] have not, in the 3 (three) years immediately preceding the Proposal Due Date, failed to perform any contract exceeding a contract value of INR [●] (Indian Rupees [●]) Only, as evidenced by the imposition of a penalty by an arbitral or judicial authority and/or arbitration award or a judicial pronouncement against us or our Associate/Affiliate, as the case may be]; or
- [we, (name the relevant Members of the Consortium) have, in the 3 (three) years immediately preceding the Proposal Due Date, failed to perform the following contracts exceeding a contract value of INR [●] (Indian Rupees [●]) Only, as evidenced by the imposition of a penalty by an arbitral or judicial authority and/or arbitration award or a judicial pronouncement against us or our Associate/Affiliate, as the case may be and there is an appeal pending against such judicial pronouncement and/or arbitration award: (Provide contract and appeal details)];
- (g) [we, [including the Members of the Consortium] have not, in the 3 (three) years immediately preceding the Proposal Due Date, had any contract terminated by any government or government instrumentality for breach by us or our Associate/Affiliate, as the case may be]; or
- [we, [including the Members of the Consortium] have, in the 3 (three) years immediately preceding the Proposal Due Date, had the following contracts terminated by a government or government instrumentality for breach by us or our Associate/Affiliate, as the case may be and there is an appeal pending against such termination before the stated judicial authority: (Provide contract and appeal details)];

- (h) we certify that we, [including the Members of the Consortium], or our/their Associate/Affiliate have not been convicted by a court of law or indicted or adverse orders passed by a regulatory authority which could cast a doubt on our ability to participate in the Bid Process and, if selected as the Selected Bidder, which could cast a doubt on our ability to develop, operate and maintain the Project, in accordance with the PPA;
  - (i) we, [including the Members of the Consortium], further certify that no investigation by a regulatory authority is pending either against us/ [any Member of the Consortium] or against our/their Associate/Affiliate or against our CEO or any of our directors, managers and employees;
  - (j) we, [including the Members of the Consortium], certify that our/their Associate/Affiliate whose financial credentials have been relied upon to meet the Financial Capacity, will continue to remain our/their Associate/Affiliate until the expiry of 1 (one) year after the Project COD; and
  - (k) we, [including the Members of the Consortium], certify that we, or our/their Associate/Affiliate whose financial credentials have been relied on by the Bidder (either wholly or in part for demonstrating its Financial Capacity) have not been declared wilful defaulter to any lender, and that there is no major litigation pending or threatened against us or any of our/their Affiliate which are of a nature that could cast a doubt on the ability or the suitability of the Bidder to undertake the Project.
10. We understand that you may cancel the Bid Process at any time and that you are neither bound to accept any Bid that you may receive nor to invite the Bidders to Bid for the Project, without incurring any liability to the Bidders, in accordance with Clause 25.1 of the RFP.
  11. We declare that we or our Associate/Affiliate are not submitting another Bid.
  12. We undertake that in case due to any change in facts or circumstances during the Bid Process, we attract the provisions of disqualification in terms of the provisions of this RFP, we shall intimate MPUVNL of the same immediately.
  13. We are submitting with this Qualification Proposal and all the documents that are required to be submitted in accordance with the RFP.
  14. We hereby irrevocably waive any right or remedy which we may have at any stage at law or howsoever arising to challenge the criteria for evaluation or question any decision taken by MPUVNL in connection with evaluation of Qualification Proposals, declaration of the Selected Bidder, or in connection with the Bid Process itself, in respect of the Project and the terms and implementation thereof, to the fullest extent permitted by applicable law and waive any and all rights and/or claims we may have in this respect, whether actual or contingent, whether present or in future.
  15. In the event of us being declared as the Selected Bidder, we agree to enter into PPA. We agree not to seek any changes in or deviations from the aforesaid draft and agree to abide by the same.
  16. We hereby declare that in the event of us being declared as the Selected Bidder, if we are unable to submit the Performance Security within the stipulated timelines or sign and return the

duplicate copy of the LOA within the prescribed timelines or if we are unable to execute the PPA within the prescribed timelines or if we are unable to submit the charter documents of the Selected Bidder or the SPV formed by the Selected Bidder within the prescribed timelines, MPUVNL will be entitled to encash and forfeit our EMD, without prejudice to any other rights and remedies it may have as per the applicable laws.

17. We understand that except to the extent as expressly set forth in the PPA, we shall have no claim, right or title arising out of any documents or information provided to us by MPUVNL or in respect of any matter arising out of or concerning or relating to the Bid Process.
18. If determined qualified to participate in the Reverse Auction Process, we undertake that the tariff that will be quoted by us will be after taking into consideration all the terms and conditions stated in the Bid Documents, our own estimates of costs and after a careful assessment of all the conditions that may affect the Bid.
19. We offer to submit a EMD to MPUVNL in accordance with the RFP.
20. We agree and understand that the Bid is subject to the provisions of the Bid Documents. In no case, shall we have any claim or right against MPUVNL if the Project is not awarded to us or our Bid is not opened or considered, as the case may be.
21. We further confirm that the technology proposed to be used by us for the Project is commercially established and operational technology.
22. We declare and confirm that we have read Clause 3.3 of the RFP and agree to comply with the eligibility requirements set out therein to participate in this tender. Accordingly, we have also enclosed all necessary certificates (including the certificate as per the format set out in Annex 9) in support of the aforesaid compliance under the Office Memorandum and the RFP. We undertake to agree and confirm that, in the event of us being declared as the Selected Bidder, if any of the statements or documents submitted in this regard are found to be false, incorrect or misleading, MPUVNL will be entitled to take appropriate action as it deems necessary.
23. We further declare and confirm that while submitting our Bid, we have taken cognizance of the office memorandum dated 10 March 2021 issued by MNRE with the subject “Approved Models and Manufacturers of Solar Photovoltaic Modules (Requirement of Compulsory Registration) Order, 2019-Implementation-Reg” and its subsequent amendments and clarifications. We shall ensure that the modules procured for the Project are included in the ALMM list-I valid on the date of invoicing of such modules.
24. This Bid Process and the Bid shall be governed by and construed in all respects according to the laws for the time being in force in India. The competent courts at Bhopal will have exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with the Bid Process.

In witness thereof, I/we submit this Qualification Proposal under and in accordance with the terms of the Bid Documents.

Yours faithfully,

Dated this [insert date] day of [insert month] 2025

Name and seal of the Bidder

(Signature, name and designation of the authorised signatory of the Bidder/Lead Member)

## ANNEX 2

### FORMAT OF EMD

*(Refer to Clause 7 and Clause 15)*

*(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value)*

Reference: \_\_\_\_\_

Bank Guarantee No.: \_\_\_\_\_

Date: \_\_\_\_\_

In consideration of the \_\_\_\_\_ *[Insert name of the Bidder]* (hereinafter referred to as '**Bidder**') submitting the response to the RFP, inter alia, for Selection of Solar Power Developer for the Development of Cumulative [●] kW of Grid-Connected Rooftop Solar PV Systems to be set up at Identified Locations of Government Premises in the District of the Madhya Pradesh for supply of power there from on long term basis, in response to the RFP No. \_\_\_\_\_ dated \_\_\_\_\_ issued by Madhya Pradesh Urja Vikas Nigam Limited (hereinafter referred to as **MPUVNL**) and MPUVNL considering such response to the RFP of \_\_\_\_\_ *[Insert name of the Bidder]* as per the terms of the RFP, the \_\_\_\_\_ *[Insert name and address of bank]* hereby agrees to unequivocally, irrevocably and unconditionally to pay to MPUVNL at \_\_\_\_\_ *[Insert name of the place from the address of MPUVNL]* forthwith without demur on demand in writing from MPUVNL or any officer authorized by it in this behalf, any amount up to and not exceeding Rupees \_\_\_\_\_ *[Insert amount not less than that derived in line with Clause 7 of this RFP]*, only on behalf of M/s \_\_\_\_\_ *[Insert name of Bidder]*.

This guarantee shall be valid and binding on this Bank up to and including \_\_\_\_\_ *[Insert date of validity in accordance with Clause 7 of this RFP]* 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 agreement.

Our liability under this Guarantee is restricted to INR \_\_\_\_\_ (Indian Rupees only). Our Bank Guarantee shall remain in force until \_\_\_\_\_ *[Insert date of validity in accordance with Clause 7 of this RFP]*. MPUVNL shall be entitled to invoke this Bank Guarantee till \_\_\_\_\_ *[Insert date of validity in accordance with Clause 7 of this RFP]*.

The Guarantor Bank hereby agrees and acknowledges that the MPUVNL 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 MPUVNL, made in any format, raised at the above-mentioned address of the Guarantor Bank, in order to make the said payment to MPUVNL.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by \_\_\_\_\_ *[Insert name of the Bidder]* and/ or any other

person. The Guarantor Bank shall not require MPUVNL to justify the invocation of this Bank Guarantee, nor shall the Guarantor Bank have any recourse against MPUVNL in respect of any payment made hereunder.

This Bank Guarantee shall be interpreted in accordance with the laws of India and the courts at Bhopal 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 MPUVNL 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 MPUVNL or to exercise, levy or enforce any distress, diligence or other process against the Bidder.

This Bank Guarantee shall be effective only when the Bank Guarantee issuance message is transmitted by the issuing Bank through SFMS and a confirmation in this regard is received by MPUVNL.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to INR\_\_\_\_\_ (Indian Rupees\_\_\_\_\_ Only) and it shall remain in force until \_\_\_\_\_ [*Date to be inserted on the basis of Clause 7 of this RFP*].

We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if MPUVNL serves upon us a written claim or demand.

Signature:

Name:

Power of Attorney No.:

For

\_\_\_\_\_ [*Insert Name and Address of the Bank*]

Contact Details of the Bank:

E-mail ID of the Bank:

Banker's Stamp and Full Address.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

## ANNEX 3

### FORMAT FOR BOARD RESOLUTIONS

*(Refer to Clause 15.1(a)(iii))*

The Board, after discussion, at the duly convened Meeting on \_\_\_\_\_ *(Insert date)*, with the consent of all the Directors present and in compliance with the provisions of the Companies Act, 2013 (erstwhile Companies Act, 1956), passed the following Resolution:

- (1) **RESOLVED THAT** Mr./Ms. \_\_\_\_\_, be and is hereby authorized to do on our behalf, all such acts, deeds and things necessary in connection with or incidental to our Bid for development of cumulative [●] kW of Grid-Connected Rooftop Solar PV Systems to be set up at Identified Government Premises in the District of Madhya Pradesh (**Project**) in the country of India vide RFP No. \_\_\_\_\_, including signing and submission of all documents and providing information/response to MPUVNL, representing us in all matters and generally dealing with MPUVNL in all matters in connection with our bid for the said Project. *(To be provided by the Bidder or the Lead Member)*.
- (2) **FURTHER RESOLVED THAT** pursuant to the provisions of the Companies Act, 2013 (erstwhile Companies Act, 1956) and compliance thereof and as permitted under the Memorandum and Articles of Association of the company, approval of the Board be and is hereby accorded to invest total Equity for developing the Project. *(To be provided by the Bidder)*.

*[Note: In the event the Bidder is a Consortium, in place of the above resolution at S. No. (2), the following resolutions are to be provided]*

**FURTHER RESOLVED THAT** pursuant to the provisions of the Companies Act, 2013 (erstwhile Companies Act, 1956) and compliance thereof and as permitted under the Memorandum and Articles of Association of the company, approval of the Board be and is hereby accorded to invest ( \_\_\_\_\_ %) Equity *[Insert the % Equity commitment as specified in the JBA]* in the Project. *(To be provided by each Member of the Consortium, including the Lead Member)*.

**FURTHER RESOLVED THAT** approval of the Board be and is hereby accorded to participate in consortium with M/s \_\_\_\_\_ *[Insert the name of other Members in the Consortium]* and Mr./Ms. \_\_\_\_\_, be and is hereby authorized to execute the Joint Bidding Agreement. Further, the Bid Documents, including the RFP and the PPA have been read, examined and understood and also the Bid has been reviewed and each element of the Bid is agreed to. *(To be provided by each Member of the Consortium, including the Lead Member)*

**FURTHER RESOLVED THAT** Mr./Ms. \_\_\_\_\_, be and is hereby authorized to execute the Power of Attorney in favour of the Lead Member. *(To be provided by each Member of the Bidding Consortium except the Lead Member)*

And

**FURTHER RESOLVED THAT** approval of the Board be and is hereby accorded to contribute such additional amount over and above the percentage limit (specified for the Lead Member and other Member of the Consortium in the Joint Bidding Agreement) to the extent becoming necessary towards the total Equity share in the Project awarded to the Consortium, obligatory on the part of the Consortium pursuant to the terms and conditions contained in the Joint Bidding Agreement dated [\_\_\_\_\_] executed by the Consortium as per the provisions of the RFP. *(To be passed by the Lead Member and other Members of the Consortium).*

- (3) **FURTHER RESOLVED THAT** approval of the Board be and is hereby accorded to M/s. \_\_\_\_\_ (Insert name of the Bidder/ Member(s) of Consortium) to use our financial capability for meeting the Net Worth for the Project and confirm that all the Equity investment obligations of M/s \_\_\_\_\_ (Insert name of the Bidder/ Member(s) of Consortium), shall be deemed to be our Equity investment obligations and in the event of any default the same shall be met by us. We have noted the amount of the performance bank guarantees required to be submitted as per the PPA and confirm that in the event that M/s \_\_\_\_\_ (Insert name of the Bidder/ Member(s) of Consortium) fails to submit the required performance bank guarantees, we shall submit the performance bank guarantees required to be submitted as per the PPA. *(To be passed by the Affiliate(s)/Associate(s) whose financial credentials have been used).*

Certified true copy

\_\_\_\_\_ (Signature, Name and stamp of Company Secretary/Director)

*Notes:*

- *This certified true copy should be submitted on the letterhead of the Company passing the relevant Board Resolution, signed by the Company Secretary/Director of such Company.*
- *This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act, 2013 (erstwhile Companies Act, 1956) may be suitably modified to refer to the law applicable to the entity submitting the board resolution. In cases where the board resolution is being issued by a Company incorporated outside India, such board resolution must be supported by an unqualified opinion issued by the legal counsel of such foreign entity stating that the board resolution is in compliance with the applicable laws of the respective jurisdictions of the Company passing the board resolution and the authorizations granted through the board resolution are true and valid. It is clarified that the legal opinion can be subject to customary assumptions, provided that such assumptions do not qualify the substantive aspect of the opinion.*
- *In case LLPs/ Partnership Firms/ Sole Proprietor, alternate documents may be presented in lieu of Board Resolution as defined in GLOSSARY of this RFP.*



## ANNEX 4

### FORMAT FOR POWER OF ATTORNEY IN FAVOUR OF LEAD MEMBER OF CONSORTIUM

*(Refer Clause 3.1(e)(iii) and Clause 15.1(a)(ii))*

Whereas Madhya Pradesh Urja Vikas Nigam Limited (**MPUVNL**) has invited applications from interested parties for the development of cumulative [●] kW of Grid-Connected Rooftop Solar PV Systems to be set up at Identified Government Premises in the District of Madhya Pradesh State (the **Project**).

Whereas ....., and ..... (collectively the **Consortium**) being Members of the Consortium and having signed a Joint Bidding Agreement dated [●], are interested in submitting a Bid for the Project in accordance with the terms and conditions of the Request for Proposal (**RFP**) and the other Bid Documents, and

Whereas it is necessary for the Members of the Consortium to designate one of them as the Lead Member with all necessary power and authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium's bid for the Project and its execution.

#### **NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS**

We, ....., having our registered office at ....., and ....., having our registered office at ....., (hereinafter collectively referred to as the **Principals**) do hereby irrevocably designate, nominate, constitute, appoint and authorise ..... having its registered office at ....., being one of the Members of the Consortium, as the Lead Member and true and lawful attorney of the Consortium (hereinafter referred to as the **Attorney**). We hereby irrevocably authorize the Attorney (with power to sub-delegate) to conduct all business for and on behalf of the Consortium, and any one of us, during the Bid Process, including undertaking all acts required for the submission of the Bid in accordance with the terms and conditions of the RFP. Additionally, we also authorise the Lead Member to do any other acts or submit any information and documents related to the above Bid submission, to do on our behalf and on behalf of the Consortium, all or any of such acts, deeds or things as are necessary or required or incidental to the submission of its Bid for the Project, including but not limited to signing and submission of all applications, undertakings and other documents and writings, participate in bidders and other conferences and respond to queries, if required. In the event the Consortium is awarded the Project Documents for developing the Project, we authorise the Lead Member to submit information/documents, sign and execute contracts and undertakings consequent to acceptance of the Bid of the Consortium in relation to the incorporation of the SPV and generally to represent the Consortium in all its dealings with MPUVNL, and/or any other Government Agency or any Person, in all matters in connection with or relating to or arising out of the Consortium's Bid for the Project and/or upon award thereof till incorporation of the SPV.

**AND** hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us/Consortium.

It is expressly understood that if the Consortium is selected as the Successful Bidder, this Power of Attorney shall remain valid, binding and irrevocable until the SPV formed by the Consortium executes the PPA with the Procurer.

IN WITNESS WHEREOF WE THE PRINCIPALS ABOVE NAMED HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS ..... DAY OF ....., 2025

For .....  
(Signature)

.....  
(Name & Title)

For .....  
(Signature)

.....  
(Name & Title)

For .....  
(Signature)

.....  
(Name & Title)

(To be executed by authorized signatories of the Members of the Consortium, except the Lead Member)

Witnesses:

1.

2.

(Notarised)

Accepted

.....

(Signature of the authorized signatory of the Lead Member)

(Name, Title and Address of the Attorney)

Instructions:

- (1) *The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.*

- (2) *Also, wherever required, the Members should submit for verification the extract of the charter documents and documents such as a board or shareholders' resolution/power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Member of the Consortium.*

## ANNEX 5

### FORMAT FOR JOINT BIDDING AGREEMENT

*(Refer to Clause 3.1(e)(iv) and Clause 15.1(a)(iv))*

*(To be executed on stamp paper of appropriate value)*

THIS JOINT BIDDING AGREEMENT is entered into on this [\_\_\_\_] Day of [\_\_\_\_\_] 2025.

AMONGST

1. [\_\_\_\_], with its registered office at [\_\_\_\_] (referred to as **Member 1** which expression will, unless repugnant to the context include its successors and permitted assigns)

AND

2. [\_\_\_\_], with its registered office at [\_\_\_\_] (referred to as **Member 2** which expression will, unless repugnant to the context include its successors and permitted assigns)

The above-mentioned parties namely Member 1 and Member 2 are collectively referred to as the **Parties** and each is individually referred to as a **Party**.

WHEREAS

- (A) Madhya Pradesh Urja Vikas Nigam Limited (referred to as **MPUVNL** which expression will, unless repugnant to the context or meaning thereof, include its successors and assigns) has invited bids (the **Bid**) by its Request for Proposal No. [\_\_\_\_] dated [\_\_\_\_] (the **RFP**) for selection of bidder(s) for development, operation and maintenance of cumulative [●] kW of Grid-Connected Rooftop Solar PV Systems to be set up at Identified Government Premises in the District of the Madhya Pradesh (**Project**).
- (B) The Parties are interested in jointly bidding for the Project as Members of a Consortium and in accordance with the terms and conditions of the Bid Documents in respect of the Project.
- (C) Clause 3.1(e)(iv) of the RFP stipulates that the Bidders qualifying on the strength of a Consortium shall submit a legally enforceable Joint Bidding Agreement in a format specified in the RFP, whereby the Members of the Consortium undertake to be liable for their respective Equity investment commitment for the formation of an SPV and undertake to submit the performance bank guarantees as required as per the provisions of the RFP and PPA, as specified herein.

**NOW IT IS HEREBY AGREED as follows:**

#### **1. Definitions and interpretations**

In this Agreement, the capitalised terms will, unless the context otherwise requires, have the meaning ascribed thereto under the RFP.

## 2. Consortium

- 2.1 The Parties do hereby irrevocably constitute a consortium (the **Consortium**) for the purposes of jointly participating in the Bid Process.
- 2.2 The Parties hereby undertake to participate in the Bid Process only through this Consortium and not individually and or through any other consortium constituted for participating in the Bid Process, either directly or indirectly or through any of their Associate/Affiliate.
- 2.3 We, the Members of the Consortium and Parties to the Joint Bidding Agreement do hereby unequivocally agree that \_\_\_\_\_ (**Insert name of the Lead Member**), shall act as the Lead Member as defined in the RFP for self and agent for and on behalf of \_\_\_\_\_ (the names of all the other Members of the Consortium to be filled in here).
- 2.4 The Lead Member is hereby authorized by the other Member of Consortium and Parties to the Joint Bidding Agreement to bind the Consortium and receive instructions for and on behalf of all Members of the Consortium.
- 2.5 The Lead Member shall be liable and responsible for ensuring the individual and collective commitment of each of the Members of the Consortium in discharging all their respective Equity obligations. Other Member of the Consortium further undertakes to be individually liable for the performance of its part of the obligations without in any way limiting the scope of collective liability envisaged in this Joint Bidding Agreement.

## 3. Incorporation of SPV

The Parties hereby undertake that in the event the Consortium is declared as the Selected Bidder and awarded the Project, it will incorporate a special purpose vehicle (**SPV**) under the Companies Act, 2013 for entering into the PPA(s) with the Procurer(s) and for performing all its obligations in terms of the PPA for the Project.

## 4. Equity Contribution

The percentage of Equity holding of each Member of the Consortium in the SPV shall be / is as follows:

Name	Percentage of Equity holding
Lead Member*	_____
Member 2	_____
<b>Total Equity</b>	<b>100%</b>

*(Note: The percentage Equity holding/ for any Member of the Consortium in the SPV cannot be Zero in the above table.)*

*\*The Members of the Consortium shall subscribe and continue to hold not less than 51% (fifty one percent) of the total Equity with voting rights of the SPV from the date of*

*incorporation of the SPV until the expiry of a period of 1 (one) year from the Project COD, provided that the Lead Member shall subscribe and hold not less than 26% (twenty six percent) of the total Equity with voting rights of the SPV from the date of incorporation of the SPV until the expiry of a period of 1 (one) year from the Project COD. Provided, further, that the Member of the Consortium whose Net Worth was assessed for the purposes of demonstrating that the Consortium has the Financial Capacity to undertake the Project, must hold not less than 26% (twenty six percent) of the total Equity and voting rights of the SPV from the date of incorporation of the SPV until the expiry of a period of 1 (one) year from the Project COD.*

In case of any breach of any of the Equity holding as specified under clause 4 above by any of the Members of the Consortium, the Lead Member shall be liable for the consequences thereof.

## **5. Equity Lock-in achievement**

The Parties acknowledge that the Members of the Consortium shall subscribe and continue to hold not less than 51% (fifty one percent) of the total Equity with voting rights of the SPV from the date of incorporation of the SPV until the expiry of a period of 1 (one) year from the Project COD, provided that the Lead Member shall subscribe and hold not less than 26% (twenty six percent) of the total Equity and voting rights of the SPV from the date of incorporation of the SPV until the expiry of a period of 1 (one) year from the Project COD. Further, the Members of the Consortium, as on the date of submission of the Bid, shall not cede Control of the Consortium until the expiry of a period of 1 (one) year from the Project COD, unless permitted otherwise by MPUVNL and the Procurer.

Provided, further, that the Member(s) of the Consortium whose Net Worth was assessed for the purposes of demonstrating that the Consortium has the Financial Capacity to undertake the Project, must hold not less than 26% (twenty six percent) of the total Equity and voting rights of the SPV from the date of incorporation of the SPV until the expiry of a period of 1 (one) year from the Project COD, unless permitted otherwise by MPUVNL and the Procurer.

## **6. General**

- 6.1 Except as specified in the Joint Bidding Agreement, it is agreed that sharing of responsibilities as aforesaid and Equity investment obligations thereto shall not in any way be a limitation of responsibility of the Lead Member under these presents.
- 6.2 It is further specifically agreed that the financial liability for Equity contribution of Lead Member shall, not be limited in any way so as to restrict or limit its liabilities. The Lead Member shall be liable irrespective of their scope of work or financial commitments.
- 6.3 This Joint Bidding Agreement shall be construed and interpreted in accordance with the laws of India and courts at Bhopal alone shall have the exclusive jurisdiction in all matters relating thereto and arising thereunder.
- 6.4 It is hereby agreed that the [Lead Member/ Member 2] shall furnish the EMD, as stipulated in the RFP, on behalf of the Consortium.
- 6.5 It is hereby agreed that in case of selection of the Consortium as the Selected Bidder, the Parties shall furnish the requisite performance bank guarantees under the PPA in favor of the Procurer,

as stipulated in the PPA. The Lead Member shall be responsible for ensuring the submission of the requisite performance bank guarantees on behalf of all the Members of the Consortium.

- 6.6 It is further expressly agreed that the Joint Bidding Agreement shall be irrevocable and, for the Selected Bidder, shall remain valid over the term of the PPA.
- 6.7 The Lead Member is authorized and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Members of the Consortium respectively from time to time in response to the RFP for the purposes of the Bid.
- 6.8 It is agreed by the Members that the above sharing of responsibilities and obligations shall not in any way be a limitation of joint and several responsibilities and liabilities of the Members, with regards to all matters relating to the Project as envisaged under the Bid Documents and PPA.
- 6.9 It is hereby expressly agreed between the Parties to this Joint Bidding Agreement that neither Party shall assign or delegate its rights, duties or obligations under this Joint Bidding Agreement except with prior written consent of MPUVNL.
- 6.10 This Joint Bidding Agreement
- (a) has been duly executed and delivered on behalf of each Party hereto and constitutes the legal, valid, binding and enforceable obligation of each such Party;
  - (b) sets forth the entire understanding of the Parties hereto with respect to the subject matter hereof; and
  - (c) may not be amended or modified except in writing signed by each of the Parties and with prior written consent of MPUVNL:

IN WITNESS WHEREOF THE PARTIES ABOVE NAMED HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.

SIGNED, SEALED AND DELIVERED For and on behalf of LEAD MEMBER by:	SIGNED, SEALED AND DELIVERED For and on behalf of MEMBER 2 by:
(Signature) (Name) (Designation) (Address)	(Signature) (Name) (Designation) (Address)

Notes:

1. *The mode of the execution of the Joint Bidding Agreement should be in accordance with the procedure, if any, laid down by applicable law and the charter documents of the executant(s)*

*and when it is so required, the same should be under common seal affixed in accordance with the required procedure.*



## ANNEX 6

### FORMAT FOR LETTER OF FINANCIAL CAPACITY

*(Refer to Clause 15.1(a)(v) and Clause 17.5 of the RFP)*

*(To be printed on Bidder/Lead Member's letterhead)*

Dated:

Reference No. \_\_\_\_\_

From: \_\_\_\_\_ *(Insert name and address of the Bidder/Lead Member)*

\_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail address: \_\_\_\_\_

To,  
CEO,  
Madhya Pradesh Urja Vikas Nigam Limited,  
Urja Bhawan  
Link Road Number 2,  
Shivaji Nagar, Bhopal,  
Madhya Pradesh,  
India – 462016

**Sub: Development of Cumulative [●] kW of Grid-Connected Rooftop Solar PV Systems to be set up at Identified Government Premises in the District of the Madhya Pradesh**

Dear Sir/Madam,

We certify that the Bidder/ Member of a Consortium [●] [Insert Name of Bidder or Member of the Consortium] has a Net Worth of INR [●] (Indian Rupees \_\_\_\_\_)\* based on:

(Between options A and B below, one will be selected “Applicable” and the other as “Not Applicable”)

S. No.	Description	
A	Audited annual accounts of the most recent Financial Year (or most recent Calendar Year or the accounting year as adopted by the Bidder, in accordance with the laws of the India) <b>OR</b>	Applicable / Not Applicable
B	Net Worth as on day dd/mm/yyyy (not more than seven days prior to the Proposal Due Date)	Applicable / Not Applicable

**\*Note (To be deleted from the submission)**

**Exhibit (i): Applicable in case of Bidder not being a Consortium**

For the above calculations, we have considered the Net Worth of the Bidder and/ or its Associate(s) /Affiliate(s) as per following details:

<b>Name of Bidder</b>	<b>Name of Entity whose Net Worth is to be considered</b>	<b>Relationship with the Bidder (Enter “Self” or “Associate/Affiliate”)</b>	<b>Applicable Year/ Date (Enter Financial Year, Calendar Year, Accounting Year or a date not more than 7 days prior to the Proposal Due Date)</b>	<b>Net Worth of the Bidder/ Associate/Affiliate (in INR Lakh)</b>
(1)	(2)	(3)	(4)	(5)
Total				

*Note – If the Bidder is relying on its own Net Worth only, the Bidder has to fill its own entity name in column (2), “Self” in column (3), enter “FY ending dd/mm/yyyy” or “CY yyyy” or AY ending dd/mm/yyyy or the date prior to Proposal Due Date, consistent with option A or option B as entered “Applicable” on the previous page in Column (4) and Net worth in column (5).*

*\*If the Bidder is wholly or partly relying on the financial capacity of its Associate/Affiliate, the column for “Relationship with Bidder” is to be filled as “Associate/Affiliate”. Further, documentary evidence to establish the relationship, duly certified by the company secretary/ chartered accountant is required to be attached with the format.*

*(Signature & Name of the person authorised by the Auditor or Board)*      *(Signature and Stamp of Statutory chartered accountant)*

**Exhibit (ii): Applicable in case of Consortium**

**(To be filled by each Member of the Consortium separately)**

**Name of Member: [Insert name of the Member]**

Net Worth requirement to be met individually or collectively by the Members of the Consortium, subject to the Lead Member demonstrating at least 51% (fifty-one percent) of the Net Worth required

for qualification. Provided, further, the Member(s) of the Consortium whose Net Worth was assessed for the purposes of demonstrating that the Consortium has the Financial Capacity to undertake the Project, must hold not less than 26% (twenty six percent) of the total Equity and voting rights of the SPV from the date of incorporation of the SPV until the expiry of a period of 1 (one) year from the Project COD, unless permitted otherwise MPUVNL and the Procurer.

For the above calculations, we have considered Net Worth of the Member of the Consortium and/ or Associate/Affiliate as per following details:

<b>Name of Consortium Member</b>	<b>Name of Entity whose Net Worth is to be considered</b>	<b>Relationship with Member of the Consortium</b>	<b>Applicable Year/ Date (Enter Financial Year, Calendar Year, Accounting Year or a date not more than 7 days prior to the Proposal Due Date)</b>	<b>Net Worth (in INR Lakh)</b>	<b>Equity Commitment in the Consortium (%)</b>
(1)	(2)	(3)	(4)	(5)	(6)
<b>Lead Member</b>		Self			
		[Associate/Affiliate]			
<b>Member 1</b>		Self			
		[Associate/Affiliate]			
Total across the Lead Member and the Consortium Members					100%

*If the Member of the Consortium is relying on its own Net Worth only, the Member of the Consortium has to fill its entity name in column (2); “Self” in column (3); enter “FY ending dd/mm/yyyy” or “CY yyyy” or AY ending dd/mm/yyyy or the date prior to Proposal Due Date, consistent with option A or option B as entered “Applicable” on the previous page in Column (4); Net worth in column (5); and Equity percent in Column 6.*

*Requirements. Further, documentary evidence to establish the relationship of an Associate/Affiliate, duly certified by the company secretary/chartered accountant is required to be attached with the format.*

We are submitting in a separate sheet, details of computation of Net Worth duly certified by Statutory Auditor or a Chartered Accountant. The detailed sheet is enclosed at Appendix-\_\_\_\_\_

We are enclosing the certified copies of balance sheet, profit & loss account, schedules and cash flow statements and bank statement by bank and other documents in support thereof for confirmation of balance in cash & bank as per the stipulations of the RFP as under:

S. No.	Document Description	Enclosed at Appendix
1		
2		
3.		

*(Signature & Name of the person authorised by the Auditor or Board)*
*(Signature and Stamp of Statutory chartered accountant)*

Date:

**Note:** Bidders are advised in their own interest to furnish separate detailed computation sheets by Statutory Auditor or Chartered Accountant for determination of Net Worth along with supporting documents referred therein as per the requirements of RFP without which no claim for Net Worth shall be considered.

## ANNEX 7

### FORMAT FOR FINANCIAL PROPOSAL

*(Refer to Clause 15.1(b) of the RFP)*

*(To be printed on the letterhead of the Bidder/Lead Member)*

Dated:

Reference No. \_\_\_\_\_

From: \_\_\_\_\_ *(Insert name and address of the Bidder/Lead Member)*

\_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail address: \_\_\_\_\_

To,  
Managing Director,  
Madhya Pradesh Urja Vikas Nigam Limited,  
Urja Bhawan  
Link Road Number 2,  
Shivaji Nagar, Bhopal,  
Madhya Pradesh,  
India - 462016

**Sub: Response to RFP No: [●] for Development of Cumulative [●] kW of Grid-Connected Rooftop Solar PV Systems to be set up at Identified Government Premises in the District of the Madhya Pradesh**

Dear Sir/Madam,

With reference to your RFP dated [\_\_\_\_\_], we, having read and examined in detail the Bid Documents and understood their contents, hereby submit our Financial Proposal. The Financial Proposal is unconditional and unqualified and valid for 180 (one hundred and eighty) days from the Proposal Due Date.

**\*Note (To be deleted from the submission)**

In witness thereof, I/we submit this Financial Proposal under and in accordance with the terms of the Bid Documents.

Yours faithfully,

Dated this *[insert date]* day of *[insert month]* 2025

Name and seal of the Bidder

(Signature, name and designation of the authorised signatory of the Bidder/Lead Member)

***Notes:***

1. *If the Bidder submits the financial bid in the E-Bidding Portal, not in line with the instructions mentioned in this RFP, then the bid shall be considered as non-responsive.*
2. *Bidder should quote Tariff only in ElectronicForms.*

## ANNEX 8

### FORMAT OF CERTIFICATE AS PER OFFICE MEMORANDUM

*(Refer to Clause 3.3 and Clause 15 of the RFP)*

*(to be submitted on the letterhead of the Bidder/Lead Member)*

Dated:

Reference No. \_\_\_\_\_

From: \_\_\_\_\_ *(Insert name and address of the Bidder/Lead Member)*

\_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail address \_\_\_\_\_

To,  
Managing Director,  
Madhya Pradesh Urja Vikas Nigam Limited,  
Urja Bhawan  
Link Road Number 2,  
Shivaji Nagar, Bhopal,  
Madhya Pradesh,  
India - 462016

With reference to the Office Memorandum, we submit the following certificate to MPUVNL.

#### Certificate for Bid

We have read the Clause regarding restrictions on procurement from a Bidder of a country which shares a land border with India. We, ..... (Bidder's name) certify that we are not from such a country or, if from such a country, have been registered with the Competent Authority. We hereby certify that we fulfil all requirements in this regard and are eligible to be considered.

*[Where applicable, evidence of valid registration by the Competent Authority to be attached].*

Yours faithfully,

Dated this *[insert date]* day of *[insert month]* 2025

Name and seal of the Bidder

(Signature, name and designation of the authorised signatory of the Bidder/Lead Member)

## ANNEX 9

### FORMAT OF CERTIFICATE SHAREHOLDING OF BIDDER

Based on its book of accounts and other published information authenticated by it, this is to certify that the shareholding pattern of ..... (name of the Bidder/Member) as on the Bid Due Date is as follows:

S. No.	Name of Shareholder	Equity Held (INR/Cr)	% of total paid up and subscribed Equity

Date:

Name of the audit firm:

Signature, name and designation of the authorised signatory)

Seal of the audit firm:



## ANNEX 10

### FORMAT FOR DISCLOSURE

*(Refer to Clause 3.3, Clause 15 and Clause 24.1(f) of the RFP)*

*(to be submitted on the letterhead of the Bidder/Each Member of the Consortium)*

Dated:

Reference No. \_\_\_\_\_

From: \_\_\_\_\_ *(Insert name and address of the Bidder/Lead Member)*

\_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail address \_\_\_\_\_

To,  
Managing Director,  
Madhya Pradesh Urja Vikas Nigam Limited,  
Urja Bhawan  
Link Road Number 2,  
Shivaji Nagar, Bhopal,  
Madhya Pradesh,  
India - 462016

We hereby declare and confirm that only we are participating in the RFP No. [●] and that our Associates/Affiliates are not submitting another Bid.

We further declare that the above statement is true & correct. We undertake that if at any stage it is found to be incorrect, then actions set out under the RFP/PPA will be taken, including but not limited to cancellation of our response to this RFP and LOA/PPA as applicable.

We also understand that the above is in addition to the penal consequences that may follow from the relevant laws for the time being in force.

We have read the Clause regarding restrictions on procurement from a Bidder of a country which shares a land border with India. We, ..... (Bidder's name) certify that we are not from such a country or, if from such a country, have been registered with the Competent Authority. We hereby certify that we fulfil all requirements in this regard and are eligible to be considered. Accordingly, we are also enclosing necessary certificates (Annexure to this format) in support of the above compliance under the RFP. We understand that in case of us being selected under this RFP, any of the above certificates is found false, MPUVNL shall take appropriate action as deemed necessary.

We further declare that we are fully aware of the binding provisions of the office memorandum dated 10 March 2021 issued by MNRE with the subject “Approved Models and Manufacturers of Solar Photovoltaic Modules (Requirement of Compulsory Registration) Order, 2019-Implementation-Reg” and the lists(s) issued thereunder, while quoting the tariff in RFP for [●] (*Enter the name of the RFP*).

We further understand that the List-I (Solar PV Modules) of the ALMM order, Annexure-I of the office memorandum issued by MNRE on 10 March 2021 will be updated by MNRE from time to time. We also understand that the modules to be procured for this project, shall be from the List-I of the ALMM order applicable on the date of invoicing of such modules.

We also further understand and accept that we shall be liable for penal action and invocation of Performance Security, if we are found not complying with the provisions of ALMM order, including those mentioned above.

Yours faithfully,

Dated this [*insert date*] day of [*insert month*] 2025

Name and seal of the Bidder

(Signature, name and designation of the authorised signatory of the Bidder/Lead Member)

**ANNEX 11**  
**UNIT WISE SITE DETAILS OF THE PROJECT**  
**Unit wise details of Sites of Seoni District (Distribution Licensee MPPoKVVCL, Madhya Pradesh)**

S.No.	Name of Institutions/ Consumer	Govt. Dept. Name	IVRS/ Consumer Code	Latitude	Longitude	Annual Consumption (kWh)	Off-Peak Annual Consumption (kWh)	Shadow Free Space Available (Sq.Ft.)	Contract Demand/ Sanctioned Load (kVA)	Available Capacity of DTR (kVA)	Proposed Capacity of each Unit (kW)
1	A E MPPKVV CO LTD, 132 KV SUBSTATION, SC 89279, LTD BHILMA	Transmission company	1121014415	22.10284	79.558098	53,849	37,694	5,500	62.5	20	20
2	A.E. 220 KV SUB STATION, SIMARIYA, MPPKVV CO.LTD, SEONI	Transmission company	1313018680	22.140902	79.524815	1,54,032	1,07,822	5,000	62.5	20	20
3	PRACHARYA GOVT GIRLS SHIKSHA PARISAR, BORDAI, TRIBAL DEPT. HOSTEL BORDAI, RES SEONI	Scheduled Castes and Scheduled Tribes Welfare Department	1313042777	22.059808	79.561206	56,659	39,661	20,287	37.5	160	30
4	ANUSUCHIT BALAK CHHATRAWASH, CHUNA BHATTI, TRIBAL DEPT. HOSTEL CHUNA BHATTI, EZ00000MANUAL	Scheduled Castes and Scheduled Tribes Welfare Department	1313046967	22.084968	79.603418	45,000	31,500	2,200	31.3	80	22
5	BLOCK, MEDICAL OFFICER COMMUNITY, CHHAPARA, CHHAPARA	Public Health & Family Welfare Department	1140004284	22.39185	79.542364	45,755	32,029	6,000	30.7	80	24
6	BLOCK MEDICAL OFFICER CIVIL HOSPITALS, KEOLARI, HOSPITAL AYUSH DEPT. KEOLARI, EZ000000MANUAL	Public Health and Family Welfare	1322040642	22.365555	79.906998	81,000	56,700	4,000	56.3	80	40
7	BLOCK MEDICAL OFFICER, OLD SC NO. 18977, HOSPITAL AYUSH DEPT. BARGHAT, BARGHAT	Public Health and Family Welfare	1303027941	22.028684	79.73539	41,772	29,240	3,500	31.3	80	22
8	TAHSILDAR EXECUTIVE MAGISTRATE, JOINT TAHSIL OFFICE, SEONI, SEONI	Revenue Department	1412052464	22.094196	79.548271	59,400	41,580	4,500	41.3	80	32
9	THE EXECUTIVE ENGINEER	PHE-(WATER WORKS)	H6382832000	22.255472	79.540405	8,95,698	6,26,989	19,099	458	600	191
10	C.M.O NAGAR PALIKA PARISHAD SEONI	NAGAR NIGAM/NAGAR PALIKA	H3613341727	22.112118	79.56936	1,84,961	1,29,473	2,000	130	160	20
11	POLICE CONTRAL ROOM POLICE AADHIKSHAK, NEAR PAAL PETROL PUMP REST HOUSE SEONI, CHARGE KE BAAJU ME SEONI SC NO-29930, SEONI	Home Department Police	1412001591	22.095345	79.549201	94,198	65,939	2,600	62.5	80	26

12	THE CHIEF MEDICAL & HEALTH OFFICER	Public Health & Family Welfare Department	H2361212801	22.095726	79.55026	3,22,272	2,25,590	87,726	300	400	172
13	THE DEAN GOVT AUTONOMOUS MEDICAL COLLEGE KANDIPUR SEONI	Public Health & Family Welfare Department	H1341000888	22.1426813	79.5676476	1,57,518	1,10,263	1,02,352	750	960	84
14	THE BLOCK MEDICAL OFFICER	Public Health & Family Welfare Department	H4708495833	22.0957188	79.5512827	52,585	36,810	17,059	125	160	28
15	GAME OFFICER FOREST, RESJHOUSE KARMAJHIRI, FOREST PENCH TIGER RESERVE KARMAJHIRI, RESJHOUSE KARMAJHIRI	Forest department	1309012043	21.8273442	79.3192322	32,400	22,680	3,412	25	50	17
16	PRINCIPAL I T I, S C NO. 10701, INDUSTRIAL TECHNICAL INSTITUTE PALARI CHHIDIYA, SEONI-RES	Technical Education and Skill Development	1313039188	22.0868995	79.5957131	14,357	10,050	12,623	93	160	8
17	PRINCIPLE GOVT . MINI ITI, PRINCIPAL GOVT ITI, SCHOOL, NEAR RANITAL	Technical Education and Skill Development	1121015108	22.5770026	79.601137	13,024	9,117	6,312	46	80	7
18	PRINCIPAL I.T.I., CHHIDIYA PALARI, INDUSTRIAL TECHNICAL INSTITUTE CHHATRAWAS, CHHATRAWAS	Technical Education and Skill Development	1313018631	22.0861042	79.5932569	12,226	8,558	5,629	41	160	7
19	JILA PANCHAYAT CEO MEETING HALL, BINJHAWADA, JILA PANCHAYAT BINJHAWADA, EZ00000MANUAL	State Govt. Other Dept.	1313045401	22.1226964	79.566468	32,400	22,680	3,412	25	160	17
20	SHRI MUKHYA KARYAPALAN YANTRI, JILA PANCHAYAT SEONI, JILA PANCHAYAT BINJHAWADA, BINJHAWADA	State Govt. Other Dept.	1313034093	22.1188383	79.5591297	16,174	11,322	3,412	25	160	9
21	DISST SPORT WALEFARE OFFICER, BEHIND DISTRJAIL, BEHIND DISTRJAIL, SEONI	Sports and Youth Welfare	1412030178	22.1045633	79.5578469	9,663	6,764	4,447	38	80	5
22	E.E. RES DN. SEONI MINI I.T.I., GHANSORE, GHANSORE,	Science and Technology Department	1115023667	22.6619546	79.9461968	23,284	16,299	7,381	54	80	12
23	PRACHARYA SASKIKALA, WADIJYA MAHA BIDNDYALY, GOVERNMENT COLLEGE, DOKARRANJI	School education department Secondary school	1322007435	22.3606943	79.9188908	14,009	9,806	4,265	31	50	7
24	PRINICPAL MINI I T I, PALARI CHOURAHA, INDUSTRIAL TECHNICAL INSTITUTE PALARI CHOURAHA, PALARI CHOURAHA	Technical Education and Skill Development	1319007114	22.2730517	79.8330367	17,651	12,356	14,841	109	160	9

25	THE PRACHARY SHASAKIYA KANYA, MAHA VIDHALAYA, TRIBAL DEPT. HOSTEL BINJHAWARA, BINJHAWARA	Scheduled Castes and Scheduled Tribes Welfare Department	1313015506	22.1221191	79.5651858	11,556	8,090	2,924	30	50	6
26	S D O P W D SHARKIT HOUSE, SEONI, SEONI, SEONI	Public Works Department (B&R)	1412043867	22.0940264	79.5487832	13,381	9,367	6,482	48	80	7
27	CHIKITSA ADHIKARI, SAMUDAYIK SAWASTHA KENDRA, HOSPITAL HEALTH DEPT., KURAI	Public Health and Family Welfare	1311011545	21.8104265	79.500824	24,945	17,462	8,359	61	160	13
28	BLOCK MEDICAL OFFICER, GOVT. HOSPITAL KEOLARI, HOSPITAL AYUSH DEPT. GOVT. HOSPITAL KEOLARI, GOVT. HOSPITAL KEOLARI	Public Health and Family Welfare	1322003494	22.3696718	79.9053841	21,824	15,277	3,753	28	80	12
29	CHIKITSA ADHIKARI PRATHMIC, CHIKITSA KENDRA, HOSPITAL AYUSH DEPT. KHAIRAPALARI, KHAIRAPALARI KHAIRAPALARI	Public Health and Family Welfare	1319001918	22.3025748	79.8150758	15,249	10,674	3,412	25	160	8
30	CHIEF EXECUTIVE OFFICER	OTHER DEPT	H5002832000	22.1197449	79.560774	33,750	23,625	19,106	140	400	18
31	PRINCIPAL GOVT POLYTECHNIC COLLEGE, GOVT. POLYTECHNIC CAMPUS, BARAPATHER, SEONI	Technical Education, Skill Development and Employment Department	1412008816	22.1000231	79.5539709	26,640	18,648	25,417	186	135	14
32	G.INDUSTRIAL TRAINING INSTITU., CHHAPARA 1, GOVT ITI, CHHAPARA 1	Technical Education, Skill Development and Employment Department	1140015935	22.398029	79.5464337	29,983	20,988	8,529	63	160	16
33	PRINCIPAL MINI ITI BARGHAT, BARGHAT, INDUSTRIAL TECHNICAL INSTITUTE, BARGHAT	Technical Education, Skill Development and Employment Department	1303016363	22.0338217	79.72574	12,715	8,900	8,529	63	160	7
34	PRICIPAL DEGREE COLLEGE, DEGREE COLLEGE SEONI, DEGREE COLLEGE SEONI, DEGREE COLLEGE SEONI	Higher education	1412024368	22.0954349	79.5393852	25,867	18,107	7,506	55	160	14
35	PRINCIPAL GOVERNMENT COLLEGE, BARGHAT, GOVERNMENT COLLEGE, BARGHAT	Higher education	1303016362	22.0337383	79.7256983	13,548	9,484	5,118	38	80	7
36	PRINCIPAL P G COLLAGE, PRINCIPAL GIRLS COLLAGE, BEHIND KOTWALI OLD JAIL PLACE, BEHIND KOTWALI OLD JAIL PLACE, JL-7	Higher education	1412028335	22.08436	79.5449133	18,932	13,253	4,265	31	160	10

37	THE MINI ITIC/O SDO, RES FIRST, INDUSTRIAL TECHNICAL INSTITUTE, KURAI	Technical Education, Skill Development and Employment Department	1311017025	21.8079187	79.5080394	9,000	6,300	8,529	63	160	5
38	PRINCIPAL DIST. EDUCATION AND, TRAINING CENTRE DOKARRANJI, DISTRICT EDUCATION INSTITUTE KEOLARI, TRAINING CENTRE DOKARRANJI	Department of School Education, Higher Secondary School	1322029130	22.3606346	79.9208665	16,271	11,390	12,724	30	80	9
39	PRINCIPAL DIST. EDU. INST., DOKARANJI, DISTRICT EDUCATION INSTITUTE KEOLARI, DOKARANJI	Department of School Education, Higher Secondary School	1322007203	22.3643994	79.9040102	13,523	9,466	5,034	26	80	7
Total											983



# Specifications for Remote Monitoring System- PM KUSUM Component A, C

## Disclaimer

- This report has been prepared on the basis set out in KPMG's contract for 'Service Provider for Supporting Structural Reforms in the Indian Power Sector' with the Secretary of State for International Development at the Department for International Development ("the Client").
- Nothing in this report constitutes a valuation or legal advice.
- KPMG has not verified the reliability or accuracy of any information obtained in the course of its work, other than in the limited circumstances set out in the Services Contract.
- In connection with the report or any part thereof, KPMG does not owe duty of care (whether in contract or in tort or under statute or otherwise) to any person or party to whom the report is circulated to and KPMG shall not be liable to any party who uses or relies on this report. KPMG thus disclaims all responsibility or liability for any costs, damages, losses, liabilities, expenses incurred by such third party arising out of or in connection with the report or any part thereof.



## Contents

Disclaimer .....	2
Specifications for Remote Monitoring System – Grid Connected Solar Pumps.....	4
Specifications for Remote Monitoring System – Decentralised Grid Connected Solar Plants.	7
System Components and Architecture: PM KUSUM Component C: Option 1 (Net Metering)	9
System Components and Architecture: PM KUSUM Component C: Option 2 (Pump to run on solar power only) .....	10
System Components and Architecture: PM KUSUM Component C or A: Option 3 (Solarisation of agricultural feeder at sub-station level) .....	11

## Specifications for Remote Monitoring System – Grid Connected Solar Pumps

1. State Implementing Agency (SIA) will have a common SWPS (Solar Water Pumping System) Management platform for monitoring of operation and performance of SWPS installed under PM KUSUM Scheme.
2. Remote Monitoring System (RMS) of SWPS should have following minimum features or modules
  - a. Solar System Performance: DC Voltage, DC current, AC output Current, Power, Energy, Inverter Status, Drive Frequency etc.
  - b. Pump Performance and Protections: Parameters such as Running Hours, Water Discharge (Output), Voltage, Current, Power, Energy of pump as well as protections required for “On Grid Systems” such as Over Voltage, Under Voltage, Voltage Un Balance, Overload, Short Circuit, Earth Leakage protection etc.
  - c. Net Metering:
    - i. As per CEA guidelines, on grid solar plant will require minimum Two energy meters mainly:
      - Bi-Directional Grid Interface Meter
      - Solar Generation Audit Meter.
    - ii. Remote Monitoring System should have provision to integrate both energy meters on DLMS communication protocol on RS232 ports
    - iii. Important electrical parameters of Bi-Directional Grid Interface Meter such as Imported Energy, Exported Energy, Net Energy, Solar Generation Energy, Voltage, Power (Import or Export)
    - iv. Important electrical parameters of Solar Generation such as Voltage, Current, PF, Power, Energy etc.
  - d. Billing Data Management: Remote Monitoring System should provide Billing parameters from Bi-Directional Grid Interface meter required by DISCOMS
  - e. RMS Performance: %Device Connectivity, %Data Availability etc.
  - f. Events and Notifications: Faults related to Pump Operation, Solar generation, inverter fault, Controller/Drive faults like overload, dry run, short circuit etc.
  - g. Consumer Management: Name, Agriculture details, Service No, Contact Details etc.
  - h. Asset Management: Ratings, Serial Number, Make, Model Number of Pump, Panel and Controller, IMEI number (of communication module) and ICCID (of SIM) etc.
  - i. Complaint and Ticket Management
  - j. Consumer Mobile Application: Generation, Running Hours, Water Discharge, Complaint logging, etc.
3. Remote Monitoring System (RMS) provided by all bidders should connect to State Level Solar Energy Data Management platform, which will have interface with National level Solar Energy Data Management platform.
4. Communication Architecture between SWPS and RMS should be as per following:
  - a. **Communication Connectivity:**
    - i. **Field Device Connectivity:** Communication between RMS and Pump Controller / Inverter should be on RS485 MODBUS RTU protocol to ensure interoperability irrespective of make and manufacturer
    - ii. **Remote Connectivity:** RMS of SWPS should be using GSM/GPRS/2G/3G/4G cellular connectivity

- iii. **Local Connectivity:** Ethernet/Bluetooth/Wi-Fi connectivity to configure parameters, notifications, communication interval, set points etc. or to retrieve locally stored data
- iv. **Sensor Connectivity:** RMS should have provision for at least four Analog inputs with 0.1% accuracy to address the requirement of local sensors connectivity if required by SIA/Consumer for applications such as irradiation, flow meter for water discharge, moisture sensor for micro irrigation etc. and four digital inputs.
- v. RMS should have provision of relay or contactors of suitable ratings for remote pump operations with multiple modes such as farmer mobile app based operations / configurable schedule based operations / sensor based operations
- b. **Communication Modes:**
  - i. Push Data on Event/Notification: such as pump on, pump off, protection operated etc.
  - ii. Push Data Periodically: important parameters of solar pump (as mentioned in tender) should be pushed to central server on configurable interval. Interval should be configurable in multiple of 1 minute.
  - iii. Command On Demand: It should be possible to send commands via GSM or GPRS to RMS either to control pump operations or to update configuration
- c. **Communication Protocol:**
  - i. RMS should provide data on MQTT Protocol to establish communication with thousands of systems.
- d. **Security:**
  - i. Communication between RMS and Server should be secured and encrypted using TLS/SSL/X.509 certificate etc.
  - ii. As a part of IoT protocol, Authentication and Authorization should be implemented using token/password mechanism
- e. **Message Format:**
  - i. RMS should provide data in a JSON message format as required by respective SNA
- f. **Data Storage:**
  - i. In case of unavailability of cellular network, RMS should store data locally and on availability of network it should push data to central server. Local data storage should be possible for at least one year in case of unavailability of cellular network.
- g. **Configuration Update Over-The-Air:** Configuration update over the air of multiple parameters such as IP, APN, Data Logging Interval, Set Points etc. is essential.

5. EMI/EMC Certifications:

1	Surge Immunity Test (IEC 61000-4-5)	A
2	Electrical Fast Transient (IEC 61000-4-4)	A
3	Electrostatic Discharge (IEC 61000-4-2)	A
4	Radiated Electromagnetic Field Test (IEC 61000-4-3)	A

<b>5</b>	Power Frequency Magnetic Field (IEC 61000-4-8)	A
<b>6</b>	Conducted Disturbances induced by radio frequency (IEC 61000-4-6)	A
<b>7</b>	Voltage Dips, short interruptions (IEC 61000-4-11)	A
<b>8</b>	Dry Heat test (IEC 60068-2-2), continuous operations @ 55 deg. C	O
<b>9</b>	Damped Heat Test (IEC 60068-2-78), @ 95% RH and 40 deg. C	O

Note: Passing Criteria

A: Temporary degradation or loss of function or performance which is self-recoverable

O: Normal performance within the specified limits

## Specifications for Remote Monitoring System – Decentralised Grid Connected Solar Plants

1. State Implementing Agency (SIA) will have a common SWPS (Solar Water Pumping System) Management platform for monitoring of operation and performance of SWPS and decentralised solar plants installed under PM KUSUM Scheme.
2. Remote Monitoring System (RMS) of SWPS should have following minimum features or modules
  - a. Solar System Performance: DC Voltage, DC current, AC output Current, Power, Energy, Status of Inverter & String Combiner Box etc.
  - b. Net Metering:
    - i. As per CEA guidelines, grid connected solar plant will require minimum Two energy meters mainly:
      - Bi-Directional Grid Interface Meter
      - Solar Generation Audit Meter.
    - ii. Remote Monitoring System should have provision to integrate both energy meters on DLMS communication protocol on RS232 ports
    - iii. Important electrical parameters of Bi-Directional Grid Interface Meter such as Imported Energy, Exported Energy, Net Energy, Solar Generation Energy, Voltage, Power (Import or Export)
    - iv. Important electrical parameters of Solar Generation such as Voltage, Current, PF, Power, Energy etc.
  - c. Billing Data Management: Remote Monitoring System should provide Billing parameters from Bi-Directional Grid Interface meter required by DISCOMS
  - d. RMS Performance: %Device Connectivity, %Data Availability etc.
  - e. Events and Notifications: Faults related to solar generation, inverter fault/alarms, Breaker status change such as on/off/trip etc.
  - f. Asset Management: Ratings, Serial Number, Make, Model Number of Inverter, String combiner Box, IMEI number (of communication module) and ICCID (of SIM) etc.
  - g. Complaint and Ticket Management
3. Remote Monitoring System (RMS) provided by all bidders should connect to State Level Solar Energy Data Management platform, which will have interface with National level Solar Energy Data Management platform.
4. Communication Architecture between SWPS and RMS should be as per following:
  - a. **Communication Connectivity:**
    - i. **Field Device Connectivity:** Communication between RMS and Inverter / String Combiner Box should be on RS485 MODBUS RTU protocol to ensure interoperability irrespective of make and manufacturer
    - ii. **Remote Connectivity:** RMS of SWPS should be using GSM/GPRS/2G/3G/4G cellular connectivity
    - iii. **Local Connectivity:** Ethernet/Bluetooth/Wi-Fi connectivity to configure parameters, notifications, communication interval, set points etc. or to retrieve locally stored data
    - iv. **Sensor Connectivity:** RMS should have provision for at least four Analog inputs with 0.1% accuracy for applications such as breaker & transformer health etc. and four digital inputs for breaker status
  - b. **Communication Modes:**
    - i. Push Data on Event/Notification: Faults related to solar generation, inverter fault/alarms, Breaker status change

- ii. Push Data Periodically: important parameters of inverter, string combiner box and energy meter should be pushed to central server on configurable interval. Interval should be configurable in multiple of 1 minute.
  - iii. Command On Demand: It should be possible to send commands via GSM or GPRS to RMS either to update configuration
- c. **Communication Protocol:**
  - i. RMS should provide data on MQTT Protocol to establish communication with thousands of systems.
- d. **Security:**
  - i. Communication between RMS and Server should be secured and encrypted using TLS/SSL/X.509 certificate etc.
  - ii. As a part of IoT protocol, Authentication and Authorization should be implemented using token/password mechanism
- e. **Message Format:**
  - i. RMS should provide data in a JSON message format as required by respective SNA
- f. **Data Storage:**
  - i. In case of unavailability of cellular network, RMS should store data locally and on availability of network it should push data to central server. Local data storage should be possible for at least one year in case of unavailability of cellular network.
- g. **Configuration Update Over-The-Air:** Configuration update over the air of multiple parameters such as IP, APN, Data Logging Interval, Set Points etc. is essential.

5. EMI/EMC Certifications:

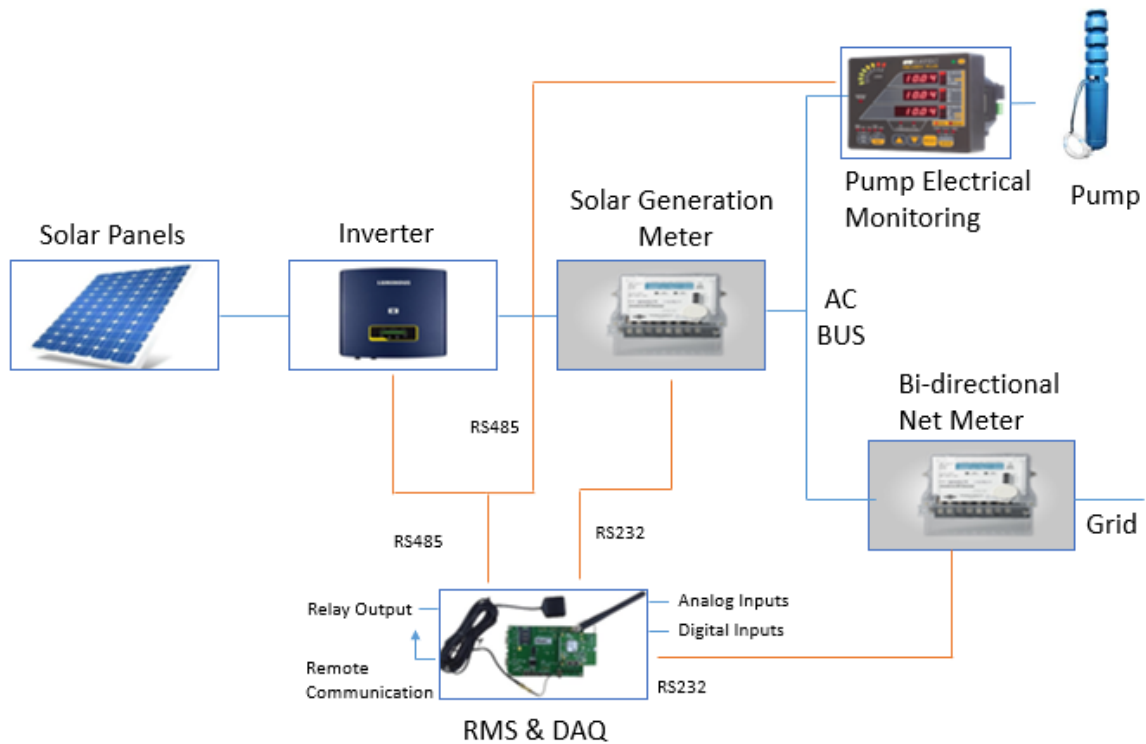
1	Surge Immunity Test (IEC 61000-4-5)	A
2	Electrical Fast Transient (IEC 61000-4-4)	A
3	Electrostatic Discharge (IEC 61000-4-2)	A
4	Radiated Electromagnetic Field Test (IEC 61000-4-3)	A
5	Power Frequency Magnetic Field (IEC 61000-4-8)	A
6	Conducted Disturbances induced by radio frequency (IEC 61000-4-6)	A
7	Voltage Dips, short interruptions (IEC 61000-4-11)	A
8	Dry Heat test (IEC 60068-2-2), continuous operations @ 55 deg. C	O
9	Damped Heat Test (IEC 60068-2-78), @ 95% RH and 40 deg. C	O

Note: Passing Criteria

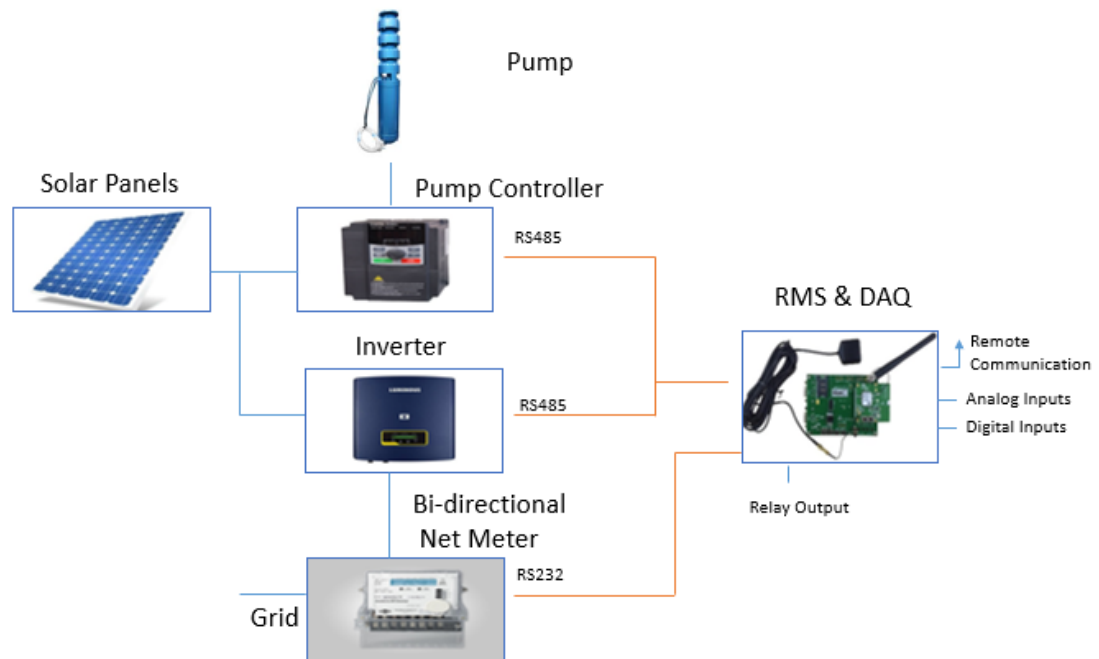
A: Temporary degradation or loss of function or performance which is self-recoverable

O: Normal performance within the specified limits

## System Components and Architecture: PM KUSUM Component C: Option 1 (Net Metering)

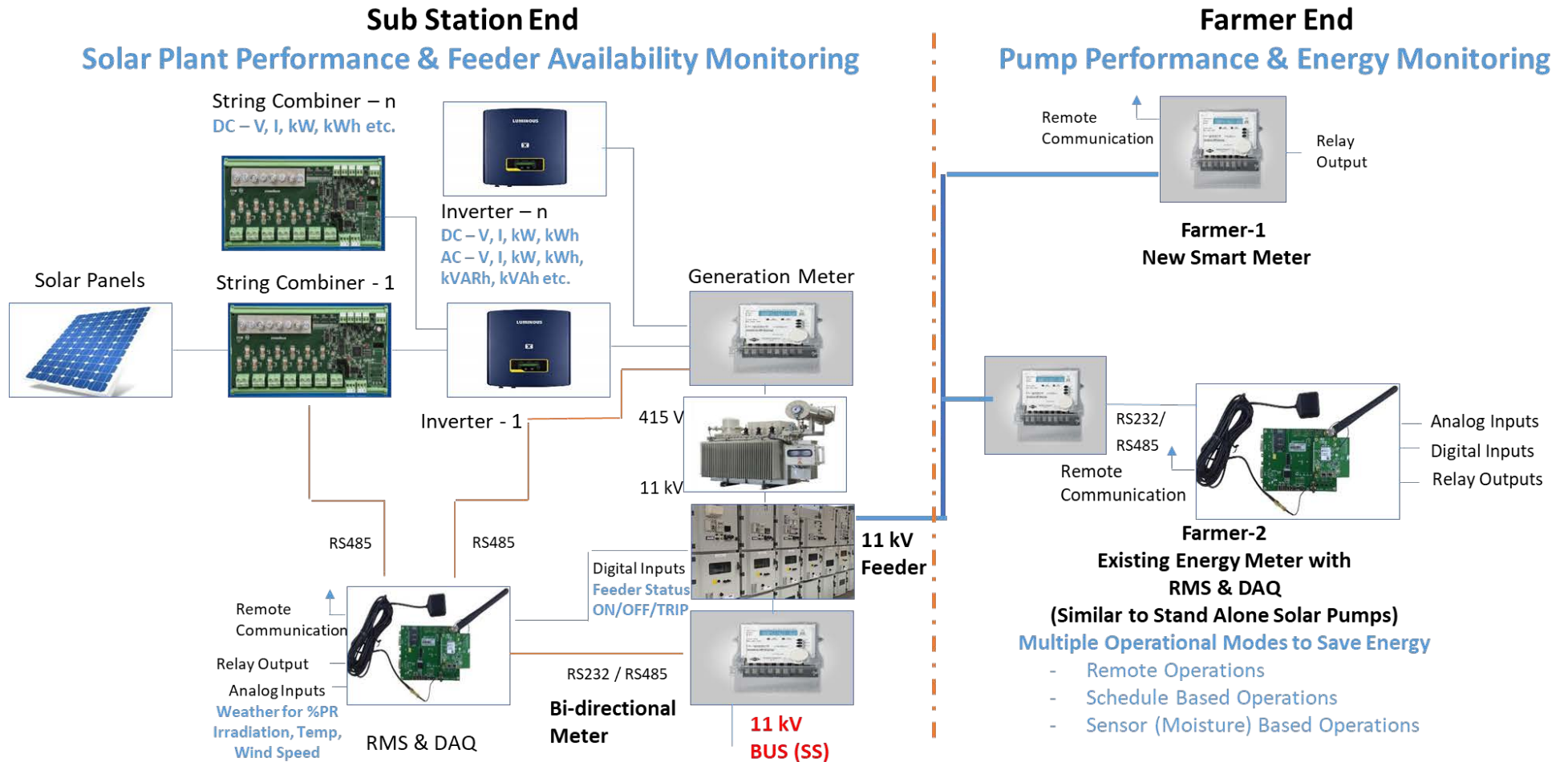


## System Components and Architecture: PM KUSUM Component C: Option 2 (Pump to run on solar power only)





## System Components and Architecture: PM KUSUM Component C or A: Option 3 (Solarisation of agricultural feeder at sub-station level)





# **RMS Communication and Security Architecture- PM KUSUM SEDM Platform**

Date: 14/07/2020

## Contents

<b>RMS Communication &amp; Security Architecture</b> .....	2
1. Security Architecture.....	2
2. RMS Registration .....	3
3. MQTT Topic Structure .....	3
4. Communication Modes .....	4
5. Communication Protocols.....	4
6. MQTT Message Structure .....	5

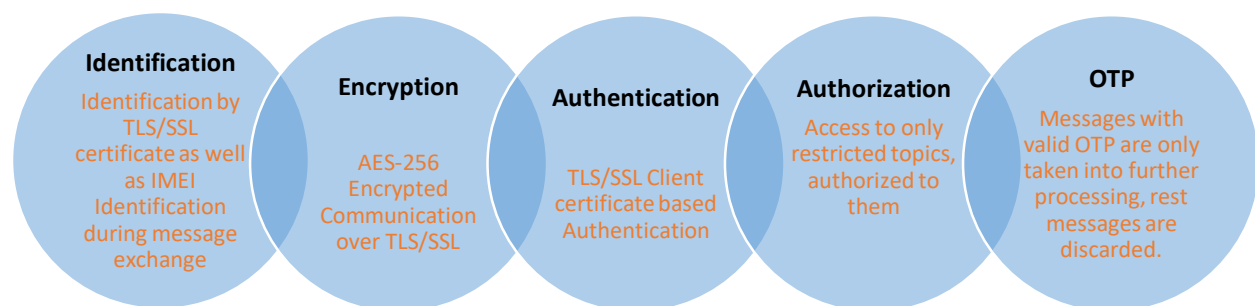
## RMS Communication & Security Architecture

1. Security Architecture (with reference to EESL Tender Annexure 8 – clause 4.d)
2. RMS Registration (with reference to EESL Tender Annexure 8 – clause 4.d)
3. MQTT Topic Structure (with reference to EESL Tender Annexure 8 – clause 4.b,4.c)
4. MQTT Message Structure (with reference to EESL Tender Annexure 8 – clause 4.e,4.f)
5. Annexure: JSON Formats with parameter keywords, sample values and description
  - a. Annexure: Pump Controller
  - b. Annexure: Energy Meter
  - c. Annexure: Inverter
  - d. Annexure: String Combiner Box (SJB)
  - e. Annexure: Heartbeat
  - f. Annexure: DAQ

### 1. Security Architecture

This section highlights the communication security architecture between RMS/DCU and State SWPS IoT Platform. With this security, architecture, third parties are unable to intercept or “sniff” the encrypted data. This stops ISPs, employers, local network administrators and cybercriminals from being able to perform “packet sniffing” to access what the traffic contains. It also protects against man in the middle (MitM) attacks. This implements Private TLS/SSL VPN to ensure highest level of security.

In additional to this, use of OTP in every message exchange shall help restrict spammers and Bots. Such OTP based mechanism will provide transaction level security which is required for remote operations.



## 2. RMS Registration

This section details how individual RMS/DCU shall be registered and communicate securely with State SWPS IoT Platform.

- Every supplier/vendor must Register all unique IMEI (International Mobile Equipment Identity) of RMS/DCU with State SWPS
- State SWPS will generate individual client certificate for RMS/DCU against unique IMEI registered and share with supplier/vendor through secured web API interface.
- Every supplier/vendor shall be able to access web API with unique credentials shared with them.
- Web API shall return individual client certificate, Device Broker url and “info” topic.
- After installation of client certificate relevant to IMEI of RMS/DCU, RMS/DCU will connect to Device Broker and get authenticated using client certificate and further shall be able to receive additional configuration details such as FTP credential, Message Topic structure etc. after subscribing to default topic.
- After client certificate expiry, RMS will connect to FTP using available credentials and download the renewed certificate

## 3. MQTT Topic Structure

This section defines the different topic structure for communication between RMS/DCU and State SWPS through Device Broker.

RMS/DCU will publish and subscribe to their respective topics only, authorization of topic shall be done against unique credentials.

Application Version	Solution	IMEI	Message Type	Publish/Subscribe
IIOT-1	Standalonesolarpump	{IMEI}	Info	Subscribe
	Gridconnectedsolarpump		OTP	Subscribe
	SolarMW		Heartbeat	Publish
	Ongridrooftop		Data	Publish
	Offgridrooftop		Ondemand	Subscribe
			Config	Subscribe

Sample Topic structure for Stand-alone Solar Pump shall be: **IIOT-1/Standalonesolarpump/{IMEI}/info**

**Multiple sub-topics will be formed for communication between RMS/DCU and sate SWPS IoT Platform**

- **Info:** Default Topic To exchange RMS/DCU configuration details
- **OTP:** To exchange OTP at every interval of 15/30/60 minutes
- **Heartbeat:** To update RMS/DCU health indicators at frequent configurable intervals.
- **Data:** To exchange data related to RMS/DCU Monitoring parameters in “**push mode**”
  - Push data Periodically
  - Push data on Event/Notification
  - History Missing Data Push Mode: History data will be identified against “**index**”

- **Ondemand:** To exchange data between RMS/DCU and Server in “**Command on Demand**” Mode
  - Each “On Demand” message will have two transactions: Commands, Response.
  - On demand command and response will be tracked against a common “**MSGID**”.
  - On demand message can be used to read and write with two command types
    - Command: “**Read**” - In json received from server replace each key with value from RMS/DCU and send the updated json back to server.
    - Command: “**Write**” - After executing the command based on key-value pair received in json, send the updated json back to server on successful execution.
    - Note: handshaking parameters such as msgid, etc has to send back to server as is, without modification
- **Config:** To update configurable parameters of Device, which is similar to Ondemand but will be used only for configurable parameters of Device, this implements “**Configuration over the air**”
  - Command: “**Read**” - In json received from server replace each key with value from RMS/DCU and send the updated json back to server.
  - Command: “**Write**” - After executing the command based on key-value pair received in json, send the updated json back to server on successful execution.
  - Note: handshaking parameters such as msgid, etc has to send back to server as is, without modification

#### 4. Communication Modes

- **Push on Periodic Interval:** In this mode deployed RMS shall transmit data of Multiple devices and sensors on different configurable time intervals such as Inverter or pump controller data at every 5 minutes, Energy Meter data at every 15 minutes, String Combiner Box data at every 10 minutes
- **Push on Event:** RMS shall detect various configurable alarm or event conditions such as Pump On / Off Status, Inverter On/Off Status, Low Water Flow Rate, Fault or Trip status etc. and It shall transmit data immediately to the server
- **On Demand Read:** In this mode, User will send command to RMS to get data as and when required and RMS will send the required data to server immediately
- **On Demand Write:** In case of Remote Operations, Farmer / Consumer shall send On Demand Write Command to the RMS and RMS will send back the acknowledgement with change in parameters after operation is completed
- **Configuration read/write:** Using this mode, user will be able to read and change configurable parameters remotely such as updating periodic interval, alarm limits, server parameters etc.

#### 5. Communication Protocols

- **Field Device Communication:** RMS to Field Devices communication such as Inverter, Pump Controller, Drive, String Combiner box, MFT/MFM, Data Acquisition System shall be established using **MODBUS RTU protocol** supported by all leading manufacturers globally

- **Energy Meter Communication:** RMS to Energy Meter communication such as Bi Directional (Revenue) Meter, Solar Generation (Audit) Meter shall be established using **DLMS/Modbus protocol** supported by all leading Meter Manufacturers in India
- **RMS to Server Communication - Industrial IoT MQTT Protocol:** RMS to Server Communication shall be established using MQTT protocol which is well accepted IoT protocol across the globe and supported by all leading IT as well as OT companies for Smart Grid, Smart RE and Smart City Applications

## 6. MQTT Message Structure

This section details message structure exchanged between RMS/DCU and state SWPS IoT Platform through Device Broker

keyword	Description	Sample Value
<b>IMEI</b>	Unique Identification of RMS/DCU – required to ensure registered source of data	863287049443888
<b>VD</b>	Virtual device/group – required for grouping parameters based on update interval/subsystems such as inverter/pump controller/meter/string combiner box etc.	2
<b>MSGID</b>	Message Transaction Id - required for “Ondemand”/”Config” message type, request/response/acknowledgement/feedback	123456789
<b>COMMAND</b>	Read/Write - Applicable only in case of “Ondemand”/”Config” message Type	Read
<b>TIMESTAMP</b>	RTC timestamp of RMS/DCU against all parameters of vd/group (YYYY-MM-DD HH:mm:ss)	2019-08-20 20:15:08
<b>STINTERVAL</b>	Periodic interval at which RMS shall store and transmit data to server. (in minutes)	15
<b>DATE</b>	local storage date – required as a reference to fetch data from local storage (YYYY-MM-DD)	2020-06-15
<b>INDEX</b>	Local storage Index – required as a reference to fetch data from local storage	5
<b>MAXINDEX</b>	Local storage maximum index of local storage date – required to calculate missing index	96
<b>LOAD</b>	Local storage retrieval command & status	0
<b>POTP</b>	Previous One Time Password	12345678
<b>COTP</b>	Current One Time Password, State SWPS Broker will update OTP at interval of 30/60 minutes	12345678
<b>Parameter-1 Parameter-2 Parameter-3 Parameter-1 ..... Parameter-n</b>	Equipment wise Keywords for multiple Parameters.	



## Communication Format Annexure

### Annexure – 1 (Revision-B) Pump Controller

Message Name	: Periodic Push Pump Controller (1)
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

#### Command Message

<b>Not Applicable</b>	

#### Response Message

Message	Description	Unit														
{																
"VD":1	Virtual Device Index/Group	-														
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group	-														
"MAXINDEX":96	maximum index of local storage date	-														
"INDEX":7,	reference of local storage	-														
"LOAD":0,	Local storage retrieval command & status	-														
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)	-														
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback	-														
"DATE":200518,	local storage date	YYMMDD														
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU	-														
"ASN_11":"34123450",	<table><tr><td colspan="2">Pump Controller Serial No.</td></tr><tr><td>RMS</td><td>0</td></tr><tr><td>DAQ</td><td>1-9</td></tr><tr><td>Pump Controller</td><td>11-19</td></tr><tr><td>Meter</td><td>21-29</td></tr><tr><td>Inverter</td><td>31-39</td></tr><tr><td>String Combiner Box</td><td>41-49</td></tr></table>	Pump Controller Serial No.		RMS	0	DAQ	1-9	Pump Controller	11-19	Meter	21-29	Inverter	31-39	String Combiner Box	41-49	-
Pump Controller Serial No.																
RMS	0															
DAQ	1-9															
Pump Controller	11-19															
Meter	21-29															
Inverter	31-39															
String Combiner Box	41-49															
"POTP":"341234",	Previous One Time Password	-														
"COTP":"341234",	Current One Time Password	-														
"PMAXFREQ1":"50.00",	Maximum Frequency	Hz														



"PFREQLSP1": "50.00",		Lower Limit Frequency	Hz
"PFREQHSP1": "50.00",		Upper Limit Frequency	Hz
"PCNTRMODE1": "1",		Solar Pump Controller Control Mode Status	-
0	Variable Frequency Control Mode		
1	CVT Mode for Solar		
2	MPPT mode for Solar		
"PRUNST1": "2",		Solar Pump Controller Run Status	-
0	Stop		
1	Running		
2	Sleep		
3	Low Speed Protection		
4	Dry Run Protection		
5	Over Current Protection		
6	Minimum Power Protection		
"PREFFREQ1": "50.00",		Solar Pump Controller Reference Frequency	Hz
"POPFREQ1": "50.00",		Solar Pump Controller Output Frequency	Hz
"POPI1": "20.00",		Output Current	A
"POPV1": "230.00",		Output Voltage	V
"POPKW1": "45.00",		Output Active Power	KW
"PDC1V1": "550.00",		DC Input Voltage	DC V
"PDC1I1": "50.00",		DC Current	DC I
"PDCVOC1": "650.00",		DC Open Circuit Voltage	DC V
"PDKWH1": "35.00",		Today Generated Energy	KWH
"PTOTKWH1": "120.00",		Cumulative Generated Energy	KWH
"POPFLW1": "2.00",		Flow Speed	LPM
"POPDWD1": "120.00",		Daily Water Discharge	Litres
"POPTOTWD1": "220.00",		Total Water Discharge	Litres
"PMAXDCV1": "750.00",		Max DC Voltage	DC V
"PMAXDCI1": "40.00",		Max DC Current	DC I
"PMAXKW1": "650.00",		Max Output Active Power	DC KW
"PMAXFLW1": "650.00",		Max Flow Speed	LPM
"PDHR1": "8.00",		Pump Day Run Hours	Hrs
"PTOTHR1": "8.00",		Pump Cumulative Run Hours	Hrs
}			

Reaction	
Not Applicable	

## Communication Format Annexure

### Annexure - 2 Energy Meter

Message Name	: Periodic Push Meter (1)
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

#### Command Message

<b>Not Applicable</b>	

#### Response Message

Message	Description
{	
"VD":2	Virtual Device Index/Group
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group
"MAXINDEX":96	maximum index of local storage date
"INDEX":7,	reference of local storage
"LOAD":0,	Local storage retrieval command & status
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback
"DATE":200518,	local storage date

"IMEI": "1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU												
"ASN_21": 12345678,	Asset Serial Number <table border="1"> <tr> <td>RMS</td><td>0</td></tr> <tr> <td>DAQ</td><td>1-9</td></tr> <tr> <td>Pump Controller</td><td>11-19</td></tr> <tr> <td>Meter</td><td>21-29</td></tr> <tr> <td>Inverter</td><td>31-39</td></tr> <tr> <td>String Combiner Box</td><td>41-49</td></tr> </table>	RMS	0	DAQ	1-9	Pump Controller	11-19	Meter	21-29	Inverter	31-39	String Combiner Box	41-49
RMS	0												
DAQ	1-9												
Pump Controller	11-19												
Meter	21-29												
Inverter	31-39												
String Combiner Box	41-49												
"MTDET1": 30012302,	Meter Detail												
"POTP": "34123450",	<b>Previous One Time Password</b>												
"COTP": "34123450",	<b>Current One Time Password</b>												
"MTBLDATE1": 18,	Billing Date for meter 1												
"DATE1": 180606,	Present date for meter1												
"TIME1": 105400,	Present time for meter1												
"IR1": 20.58,	R Phase Current in Amps												
"IY1": 20.65,	Y Phase Current in Amps												
"IB1": 20.12,	B Phase Current in Amps												
"VRN1": 240.12,	R Phase to Neutral Voltage in Volts												
"VYN1": 242.13,	Y Phase to Neutral Voltage in Volts												
"VBN1": 243.55,	B Phase to Neutral Voltage in Volts												
"VRY1": 420.18,	Phase to Phase Voltage(R-Y) in Volts												
"VYB1": 419.38,	Phase to Phase Voltage(Y-B) in Volts												
"VBR1": 421.5,	Phase to Phase Voltage(B-R) in Volts												
"PFR1": 0.98,	R Phase Power Factor												
"PFY1": 0.97,	Y Phase Power Factor												
"PFB1": 0.96,	B Phase Power Factor												
"FRQ1": 50.05,	Grid Frequency												
"POWR1": 42.578,	R Phase Active Power in KW												
"POWY1": 42.156,	Y Phase Active Power in KW												
"POWB1": 42.354,	B Phase Active Power in KW												
"POW1": 42.185,	Total Active Power in KW												
"RPOWR1": 22.123,	R Phase Reactive Power in KVAR												
"RPOWY1": 20.110,	Y Phase Reactive Power in KVAR												
"RPOWB1": 22.310,	B Phase Reactive Power in KVAR												
"RPOW1": 65.610,	Total Reactive Power in KVAR												
"APOWR1": 55.610,	R Phase Apparent Power in KVA												
"APOWY1": 52.910,	Y Phase Apparent Power in KVA												
"APOWB1": 53.911,	B Phase Apparent Power in KVA												
"APOW1": 14.198,	Total Apparent Power in KVA												
"KWHNET1": 98561.4,	Cumulative Net Energy in KWH												
"KWHIMP1": 98561.4,	Cumulative Import Energy in KWH												
"KWHEXP1": 98561.2,	Cumulative Export Energy in KWH												
"KVAHNET1": 99100.3,	Cumulative Net Energy in KVAH												
"KVAHIMP1": 99105.1,	Cumulative Import Energy in KWH												
"KVAHEXP1": 98999.1,	Cumulative Export Energy in KWH												
"MDKWIMP1": 100.3,	Rising Demand (Import) in KW												
"MDKWEXP1": 98.6,	Rising Demand (Export) in KW												

"POFF1":1020,	Grid Power Failure in Minutes
"TC1":100,	Total Tamper Counts
"PF1":0.99,	Average PF
"LBKWHNET1":98561,	Last Billing Cycle Net Energy in KWH
"LBKWHIMP1":98561,	Last Billing Cycle Import Energy in KWH
"LBKWHEXP1":98561,	Last Billing Cycle Export Energy in KWH
"PMDKVAIMP1":22.50,	Present MD KVA Import
"PMDKVAEXP1":0.00,	Present MD KVA Import
"LBMDKWIMP1":7.07,	Last Billing MD KW Import
"LBMDKWEXP1":0.00,	Last Billing MD KW Export
"LBMDKVAIMP1":7.07,	Last Billing MD KVA Import
"LBMDKVAEXP1":0.00,	Last Billing MD KVA Export
"MDRSTC1":4	MD Reset Count
}	

Reaction	
Not Applicable	

## Communication Format Annexure

### Annexure – 3 Inverter

Message Name	: Inverter Periodic Push (INVERTER-1)
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

#### Command Message

<b>Not Applicable</b>	

#### Response Message

Message	Description
{	
"VD":5	Virtual Device Index/Group
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group
"MAXINDEX":96	maximum index of local storage date
"INDEX":7,	reference of local storage
"LOAD":0,	Local storage retrieval command & status
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback
"DATE":200518,	local storage date
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU
"ASN_31":"34123450",	<b>Inverter Serial No.</b>

	RMS	0	
	DAQ	1-9	
	Pump Controller	11-19	
	Meter	21-29	
	Inverter	31-39	
	String Combiner Box	41-49	
"POTP": "34123450",	Previous One Time Password		
"COTP": "34123450",	Current One Time Password		
"IST1": 1,	Inverter Status		
"IFREQ1": 40,	Frequency		
"IPF1": 0.8,	Power Factor		
"IDC1V1": 500,	DC-1 Voltage		
"IDC1I1": 200,	DC-1 Current		
"IDC1KW1": 200,	DC-1 Power		
"IDC2V1": 243.55,	DC-2 Voltage		
"IDC2I1": 420.18,	DC-2 Current		
"IDC2KW1": 200,	DC-2 Power		
"IDC3V1": 419.38,	DC-3 Voltage		
"IDC3I1": 421.8,	DC-3 Current		
"IDC3KW1": 200,	DC-3 Power		
"IDC4V1": 0.98,	DC-4 Voltage		
"IDC4I1": 0.97,	DC-4 Current		
"IDC4KW1": 200,	DC-4 Power		
"IRPHV1": 0.96,	R phase voltage		
"IRPHI1": 50.05,	R phase current		
"IRPHKW1": 50.05,	R phase Active Power		
"IYPHV1": 42.578,	Y phase voltage		
"IYPHI1": 42.156,	Y phase current		
"IYPHKW1": 50.05,	Y phase Active Power		
"IBPHV1": 42.354,	B phase voltage		
"IBPHI1": 42.185,	B phase current		
"IBPHKW1": 50.05,	B phase Active Power		
"IKW1": 22.123,	Active Power		
"ITKWH1": 20.110,	Today Generated Energy		
"ITON1": 22.310,	Today On Time of Inverter		
"ILKWH1": 65.610,	Life time Generated Energy		
"ILON1": 55.610,	Life time running hours		
"ITEMP1": 52.910,	Inverter Temperature		
"IFT11": 53.911,	Fault-1		
"IFT21": 14.198,	Fault-2		
"IFT31": 98561.4,	Fault-3		
"IFT41": 98561.4,	Fault-4		
"IFT51": 98561.2,	Fault-5		
"IKVA1": 99100.3,	Apparent power		
"IKVAR1": 99105.1	Reactive power		
}			

Reaction	
Not Applicable	

## Communication Format Annexure

### Annexure - 4 String Combiner Box

Message Name	: Periodic Push String Combiner Box
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message	
Not Applicable	

Response Message					
Message	Description				
{					
"VD":9	Virtual Device Index/Group				
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group				
"MAXINDEX":96	maximum index of local storage date				
"INDEX":7,	reference of local storage				
"LOAD":0,	Local storage retrieval command & status				
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)				
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback				
"DATE":200518,	local storage date				
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU				
"ASN_41":"34123450",	<b>SJB Serial no</b> <table> <tr> <td>RMS</td><td>0</td></tr> <tr> <td>DAQ</td><td>1-9</td></tr> </table>	RMS	0	DAQ	1-9
RMS	0				
DAQ	1-9				

	Pump Controller	11-19	
	Meter	21-29	
	Inverter	31-39	
	String Combiner Box	41-49	
"POTP": "34123450",	Previous One Time Password		
"COTP": "34123450",	Current One Time Password		
"SI11": "3.00",	SJB1, Channel1 Current		
"SI21": "5.00",	SJB1, Channel2 Current		
"SI31": "5.00",	SJB1, Channel3 Current		
"SI41": "5.00",	SJB1, Channel4 Current		
"SI51": "5.00",	SJB1, Channel5 Current		
"SI61": "5.00",	SJB1, Channel6 Current		
"SI71": "5.00",	SJB1, Channel7 Current		
"SI81": "5.00",	SJB1, Channel8 Current		
"SI91": "5.00",	SJB1, Channel9 Current		
"SI101": "5.00",	SJB1, Channel10 Current		
"SI111": "5.00",	SJB1, Channel11 Current		
"SI121": "5.00",	SJB1, Channel12 Current		
"SI131": "5.00",	SJB1, Channel13 Current		
"SI141": "5.00",	SJB1, Channel14 Current		
"SI151": "5.00",	SJB1, Channel15 Current		
"SI161": "5.00",	SJB1, Channel16 Current		
"SI171": "5.00",	SJB1, Channel17 Current		
"SI181": "5.00",	SJB1, Channel18 Current		
"SI191": "5.00",	SJB1, Channel19 Current		
"SI201": "5.00",	SJB1, Channel20 Current		
"SI211": "5.00",	SJB1, Channel21 Current		
"SI221": "5.00",	SJB1, Channel22 Current		
"SI231": "5.00",	SJB1, Channel23 Current		
"SI241": "5.00",	SJB1, Channel24 Current		
"SDCV1": "635.00",	SJB1, DC Voltage		
"SDCTOTI1": "40.00",	SJB1, Total DC Current		
"SDCTOTKW1": "28.00",	SJB1, Total DC Power		
"SDI11": "1.00",	SJB1, Digital Input1		
"SDI21": "1.00",	SJB1, Digital Input2		
"ST11": "1.00",	SJB1, Temperature1		
"ST21": "1.00",	SJB1, Temperature2		
"ST31": "1.00"	SJB1, Temperature3		
}			

Reaction	
Not Applicable	



## Communication Format Annexure

### Annexure – 5 RMS

Message Name	: RMS
Message Format	: JSON
Message Type	: Heartbeat
Message Command Flow	: Not Applicable
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

#### Command Message

<b>Not Applicable</b>	

#### Response Message

Message	Description
{	
"VD":0	Virtual Device Index/Group
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group
"MAXINDEX":96	maximum index of local storage date
"INDEX":7,	reference of local storage
"LOAD":0,	Local storage retrieval command & status
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback
"DATE":200518,	local storage date
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU
"POTP":"341234",	<b>Previous One Time Password</b>
"COTP":"341234",	<b>Current One Time Password</b>
"GSM":1,	Device connected to GSM network
"SIM":1,	SIM detected (1 - detected)
"NET":1,	Device in Network (1 - in network)
"GPRS":"1",	GPRS connected (1 - connected)

"RSSI":22,	Signal Strength
"SD":1,	SD card detected (1 - detected)
"ONLINE":1,	Device Online (1- Online)
"GPS":1,	GPS Module Status (1-ON,0-OFF)
"GPSLOC":1,	GPS Location Locked
"RF":1,	RF Module Status (1-ON,0-OFF)
"RTCDATE":180918,	RTC Date
"RTCTIME":175800,	RTC Time
"TEMP":45.5,	Device Temperature
"LAT":19.06,	Latitude from gps
"LONG":72.8777,	Longitude from gps
"SIMSLOT":1,	Sim Slot (Current Sim Slot: 1 or 2)
"SIMCHNGCNT":10,	Total Sim Slot Change Count
"FLASH":1,	Device Flash Status 1: Detected 0: Error
"BATTST":0,	Battery Input Status: 1 if on battery power else 0
"VBATT":5.0,	Battery Voltage
"PST":1	Power Supply (1-Mains, 2-Battery)
}	

Reaction	
Not Applicable	

## Communication Format Annexure

### Annexure – 6 DAQ System

Message Name	: Periodic Push DAQ System
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

#### Command Message

<b>Not Applicable</b>	

#### Response Message

Message	Description
{	
"VD":12	Virtual Device Index/Group
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group
"MAXINDEX":96	maximum index of local storage date
"INDEX":7,	reference of local storage
"LOAD":0,	Local storage retrieval command & status
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback
"DATE":200518,	local storage date
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU
"POTP":"34123450",	<b>Previous One Time Password</b>
"COTP":"34123450",	<b>Current One Time Password</b>
"AI1":45.5,	Analog Input – 1
"AI2":45.5,	Analog Input – 2
"AI3":45.5,	Analog Input – 3
"AI4":45.5,	Analog Input – 4

"DI11":1,	Digital Input – 1
"DI21":0,	Digital Input – 2
"DI31":1,	Digital Input – 3
"DI41":0,	Digital Input – 4
"DO11":1,	Digital Output – 1
"DO21":1,	Digital Output – 2
"DO31":1,	Digital Output – 3
"DO41":1	Digital Output – 4
}	

Reaction	
Not Applicable	

## Annexure - 7

Message Name	: On Demand Read/Write Parameter/Keyword
Message Format	: JSON
Message Type	: Config
Message Command Flow	: Cloud Server-> RMS
Message Response Flow	: RMS -> Cloud Server
Message Medium	: GPRS

Command Message	
Message	Description
{	
"timestamp":"2018-09-18 17:58:00",	
"type": "config",	
"cmd": "write",	To write config
"msgid": "130",	Server Auto Generated
"APN1": "www"	APN Value for sim1
"USR1": "string"	sim1 user name
"PASS1": "string"	sim1 password
"APN2": "Internet"	APN Value for sim2
"USR2": "string"	Sim2 user name
"PASS2": "string"	Sim2 password
"RESTART":1	To restart DCU, 1 : Execute command
"UPDATEINTERVAL":15	Enter update interval in mins.
"HEARTINTERVAL":5	Heartbeat Update Interval in mins
"URTCDATE":200622	DCU RTC Date (YYMMDD) Update
"URTCTIME":220312	DCU RTC Time (HH:MM:SS) Update - 24 hour format
"UPDATERTC":1	Update RTC, 1: Execute command, 0 : Successful execution
"GSMSYNC":1	RTC auto GSM synchronization, 1: to execute command
"DO1":1	Pump Remote ON/OFF Operation (1-ON, 0-OFF)
"AI1ZERO":1	Engineering Zero Value (4 mA dc) for AI1 E.G. 0(LPM)
"AI1SPAN":100	Engineering Span Value (20 mA dc) for AI1 E.G. 5000(LPM)
"AI2ZERO":1	Engineering Zero Value (4 mA dc) for AI2

"AI2SPAN":100	Engineering Span Value (20 mA dc) for AI2
"AI3ZERO":1	Engineering Zero Value (4 mA dc) for AI3
"AI3SPAN":100	Engineering Span Value (20 mA dc) for AI3
"AI4ZERO":1	Engineering Zero Value (4 mA dc) for AI4
"AI4SPAN":100	Engineering Span Value (20 mA dc) for AI4
"URL": "rms1.kusumiiot.co"	URL of Broker Server
"PORT":8883	Port of Broker Server
"CID": "d:860906045525646\$standalonesolarpump\$27"	Unique Client id of device
"USERNAME": "860906045525646\$standalonesolarpump\$27"	Username for device authentication
"PASSWORD": "9e0baa73"	Password for device authentication
"FTPPURL": "rms1.kusumiiot.co"	URL for FTP
"FTPUSER": "866191037709301"	Username for FTP
"FTPPASS": "908552f"	Password for FTP
"FTPSPORT":22	Port for FTP
"FTPDOWN":1	Download Certificates from ftp 1: To execute command, 0: Command is successfully executed
}	

Response Message	
Message	Description
{	
"timestamp": "2018-09-18 17:58:00",	
"type": "config",	
"cmd": "write",	To write config
"msgid": "130",	Server Auto Generated
"APN1": "www"	APN Value for sim1
"USR1": "string"	sim1 user name
"PASS1": "string"	sim1 password
"APN2": "Internet"	APN Value for sim2
"USR2": "string"	Sim2 user name
"PASS2": "string"	Sim2 password
"RESTART":1	To restart DCU, 1 : Execute command
"UPDATEINTERVAL":15	Enter update interval in mins.
"HEARTINTERVAL":5	Heartbeat Update Interval in mins

"URTCDATE":200622	DCU RTC Date (YYMMDD) Update
"URTCTIME":220312	DCU RTC Time (HH:MM:SS) Update - 24 hour format
"UPDATERTC":1	Update RTC, 1: Execute command, 0 : Successful execution
"GSMSTIME":1	RTC auto GSM synchronization, 1: to execute command
"DO1":1	Pump Remote ON/OFF Operation (1-ON, 0-OFF)
"AI1ZERO":1	Engineering Zero Value (4 mA dc) for AI1 E.G. 0(LPM)
"AI1SPAN":100	Engineering Span Value (20 mA dc) for AI1 E.G. 5000(LPM)
"AI2ZERO":1	Engineering Zero Value (4 mA dc) for AI2
"AI2SPAN":100	Engineering Span Value (20 mA dc) for AI2
"AI3ZERO":1	Engineering Zero Value (4 mA dc) for AI3
"AI3SPAN":100	Engineering Span Value (20 mA dc) for AI3
"AI4ZERO":1	Engineering Zero Value (4 mA dc) for AI4
"AI4SPAN":100	Engineering Span Value (20 mA dc) for AI4
"URL": "rms1.kusumiiot.co"	URL of Broker Server
"PORT":8883	Port of Broker Server
"CID": "d:860906045525646\$standalonesolarpump\$27"	Unique Client id of device
"USERNAME": "860906045525646\$standalonesolarpump\$27"	Username for device authentication
"PASSWORD": "9e0baa73"	Password for device authentication
"FTPUURL": "rms1.kusumiiot.co"	Url for FTP
"FTPUSER": "866191037709301"	Username for FTP
"FTPPASS": "908552f"	Password for FTP
"FTPPORT":22	Port for FTP
"FTPDOWN":1	Download Certificates from ftp 1: To execute command, 0: Command is successfully executed
}	

Command Message	
Command – B. In case, if some key in command are invalid	
Message	Description
{	
"timestamp":"2018-09-18 17:58:00",	
"type":"config",	
"cmd":"write",	to write config
"msgid":"130",	server auto generated
"APNN1": 2	send value "2"
"USR1": "xyz"	send value "xyz"
}	

Response Message	
Message	Description
{	
"timestamp":"2018-09-18 17:58:00",	
"type": "config",	
"cmd":"write",	to write config
"msgid":"130",	server auto generated
"APNN1": 0	invalid Key, value will be returned '0'
"USR1": "xyz"	actual value received
}	

Reaction	
Not Applicable	



**RESCO**

**POWER PURCHASE AGREEMENT (PPA)**

**For**

**PROCUREMENT OF \_\_\_\_\_ kW SOLAR POWER ON LONG TERM BASIS  
THROUGH GRID-CONNECTED ROOFTOP SOLAR PV SYSTEMS TO BE  
SET UP AT IDENTIFIED GOVERNMENT PREMISES IN THE DISTRICT  
[•] OF THE MADHYA PRADESH**

**(Under RESCO Mode)**

**Between**

\_\_\_\_\_  
**Power Developer]**  
**(Solar Power Developer)**

**And**

\_\_\_\_\_  
**(Procurer)**

**[Month], 2025**

## TABLE OF CONTENT

DEFINITIONS AND INTERPRETATION .....	5
TERM OF PPA .....	18
CONDITION PRECEDENT .....	19
CONSTRUCTION AND INSTALLATION OF THE SYSTEM.....	22
SYNCHRONISATION, SYSTEM ACCEPTANCE TESTING AND COMMISSIONING .....	33
DISPATCH .....	35
METERING AND BILLING .....	35
TARIFF AND PAYMENT .....	37
INSURANCES.....	40
FORCE MAJEURE.....	40
CHANGE IN LAW.....	43
EVENTS OF DEFAULT AND TERMINATION.....	47
LIABILITY AND INDEMNIFICATION .....	53
GENERAL COVENANTS .....	55
ASSIGNMENTS AND CHARGES .....	59
GOVERNING LAW AND DISPUTE RESOLUTION.....	60
SUBSTITUTION RIGHTS OF LENDERS .....	62
REPRESENTATIONS & WARRANTIES .....	68
SCHEDULE 1: SCOPE OF WORK.....	75
SCHEDULE 2: TECHNICAL SPECIFICATIONS .....	80
SCHEDULE 3: TARIFF SCHEDULE.....	90
SCHEDULE 4: COD SCHEDULE.....	91
SCHEDULE 5: LETTER FROM NODAL AGENCY CONFIRMING THE CAPACITY.....	92
SCHEDULE 6:.....	93
SCHEDULE 7: UNITS DETAILS .....	94

This Power Purchase Agreement is signed on the xx Day of <Month> of 202\_\_ > at <City Name>.

Between

\_\_\_\_\_[Insert name of the Solar Power Developer], a Company/Limited Liability Partnership (LLP) firm/ Partnership Firm/ Sole Proprietor/ Consortium/Project Company in any form submitting the Bid incorporated under the Appropriate Act/any other relevant laws as applicable, having its registered office at \_\_\_\_\_[Insert address of the registered office of Solar Power Developer] (hereinafter referred to as “Solar Power Developer” or “SPD”, which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and permitted assigns) as a Party of the first part;

And

\_\_\_\_\_[Insert name of the Procurer],  
having its registered office at \_\_\_\_\_  
[Insert address of the registered office of Procurer (hereinafter referred to as “Procurer”, which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and assigns) as a Party of the second part.

And,

Madhya Pradesh Urja Vikas Nigam Limited (MPUVNL) having its registered office at \_\_\_\_\_ [Insert address of the registered office of MPUVNL] (hereinafter referred to as “Nodal Agency”, which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and assigns) as a Party of the third part

The Solar Power Developer, Procurer and Nodal Agency are individually referred to as ‘Party’ and collectively referred to as ‘Parties’.

Whereas:

- A. Nodal Agency has identified the Procurer for procuring the power from the grid interactive rooftop solar PV Project.
- B. Procurer plans to source solar PV based electricity for its various Unit(s) as per Schedule-7 of this Agreement

- C. After meeting the eligibility requirements, the Solar Power Developer has been selected by Nodal Agency through competitive bidding process for development of solar power Project, and generation and sale of solar power to the Procurer.
- D. The Solar Power Developer has been notified by Nodal Agency for “*Design, engineering, supply, finance, installation, erection & Commissioning along with Comprehensive Operation and Maintenance (“O&M”) of the Unit(s)/ Project for Sale of Solar Power to Procurer for a period of 25 Contract Years*” and has been awarded \_\_\_\_\_ kW of capacity as per technical specification & other details of the RFP no. \_\_\_\_\_ dated. .... and this PPA.
- E. Consequent upon work order pursuant to the issuance of Letter of Award (LOA) by Nodal Agency for signing of PPA and other agreement, if any, the Solar Power Developer has agreed to set-up solar PV Project based on Photo-voltaic technology of \_\_\_\_\_  
kW capacity at the Premises of Procurer as per Schedule-7 of the Agreement.
- F. The Solar Power Developer has agreed to sign this PPA with Procurer to sell solar power from the Project to Procurer as per the terms and conditions of this PPA read in conjunction with those of RFP.
- G. Procurer has agreed to purchase such solar power from Solar Power Developer for consumption within Premise at the Tariff discovered through Reverse Auction mechanism conducted by the Nodal Agency (**SCHEDULE 3**).
- H. If there is delay or default in payment due under the PPA by Procurer for more than thirty (30) day of Due Date, Nodal Agency would ensure such payment from revolving fund created with it through budget. Procurer has agreed to re-coupe the fund of the Nodal Agency on priority subsequently.
- I. The Parties, hereby, agree to execute this PPA setting out the terms and conditions for the sale of power by Solar Power Developer to Procurer.

Now therefore, in consideration of the premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the Parties as follows:

## DEFINITIONS AND INTERPRETATION

### 1. DEFINITIONS

The terms used in this PPA, unless as defined below or repugnant to the context, shall have the same meaning as assigned to them by the Electricity Act, 2003 and the rules or regulations framed there under, including those issued / framed by the Appropriate Commission, as amended or re-enacted from time to time.

"Act" or "Electricity Act, 2003"	shall mean the Electricity Act, 2003 and include any amendments and substitution from time to time;
"Affected Party"	shall have meaning as per Article 47.2
"Appropriate Commission"	shall mean the State Electricity Regulatory Commission referred to in section 82 of the Electricity Act 2003 (as amended from time to time);
"Benchmark Cost"	shall have meaning as per Article 108;
"Bid"	shall mean technical Bid or/ and Financial Bid submitted by a Bidder, in response to RFP, in accordance with the terms and conditions of the RFP;
"Bill Dispute Notice"	shall mean the notice issued by a Party raising a Dispute regarding a Monthly Bill or a Supplementary Bill issued by the other Party;
"Business Day"	shall mean with respect to Solar Power Developer and Procurer, a Day other than Sunday/ public holiday or a statutory holiday, on which the banks remain open for business in Bhopal
"Capacity Utilization Factor" or "CUF"	<p>(CUF) in a Year shall mean the ratio of (the output of the SPV Power Plant in a Contract Year) versus (installed project PPA Capacity x number of Days in the Contract Year x 24).</p> <p>(CUF = Cumulative Project output in kWh / (PPA capacity x 24 x number of Days in the Contract year));</p> <p>Derating of output of SPV modules of not more than 1% per year shall be allowed, implying shortfall in CUF of not be more than 0.15% per year.</p> <p>However, for demonstration of successful Commissioning, CUF shall mean the ratio of the output of the SPV Power Plant in a day versus PPA Capacity x 1 x 24, adjusted to seasonality as per provisions of Article 30</p>

“CERC”	shall mean the Central Electricity Regulatory Commission of India, constituted under sub – section (1) of Section 76 of the Electricity Act, 2003, or its successors;
Calendar Year	means a year commencing on 1 January and ending on 31 December.
“Category I”	shall mean as category notified under Madhya Pradesh Policy for Decentralized Renewable Energy System, 2016 and its amendment and substitution from time to time.
“Change in Law”	shall have the meaning ascribed thereto in Article 52 of this PPA;
“Commissioning”	shall have the meaning ascribed in Article 29 of this PPA;
“Competent Authority”	shall mean Managing Director of MPUVNL, himself and/or a person or group of persons nominated by him for the mentioned purpose in this PPA;
“Competent Court of Law”	shall mean any court or tribunal or any similar judicial or quasi- judicial body in India that has jurisdiction to adjudicate upon issues relating to this PPA;
“Consents, Clearances and/ or Permits” or “Consents”	shall mean all authorizations, licenses, approvals, registrations, permits, waivers, privileges, acknowledgements, agreements, or concessions required to be obtained from or provided by any concerned authority for the purpose of setting up of the generation facilities and/ or supply of power;
“Consumer(s)”	shall mean any person who is supplied electricity for his own use by a licensee or the Government or by any other person engaged in the business of supplying electricity to the public under the Act or any other law for the time being in force and includes any person whose Premises are, for the time being, connected for the purpose of receiving electricity with the works of a DISCOM, the Government or such other person, as the case may be. Users who have merely wheeling/ supply arrangements with the licensee are also covered as Consumers;
“Construction Period”	shall mean the period between the Effective Date and COD of Unit(s) under PPA;
“Contract Year”	means the First Contract Year and thereafter each period of 12 (twelve) months, provided that the last Contract Year shall end on the last day of the Term of PPA.
“Consultation Period”	shall mean the period of sixty (60) Days or such other longer/ shorter period as the Parties may agree, commencing from the date of issuance of a SPD’s Preliminary Default Notice or Procurer Preliminary Default Notice as provided in 0 of this PPA, for consultation between the Parties to mitigate the consequence of the relevant event having regard to all the circumstances;

<b>Data Room</b>	<p>means the virtual data room that will be open to Bidders and their advisors from the date specified in Schedule 1 until the Proposal Due Date.</p> <p>It is clarified that, on the E-bidding Portal, 'Data Room' is referred to as 'Buyer Data-Room Tender-Specific (BDR-TS)'</p>
<b>"DDO"</b>	<p>Department in the District [ ■ ] of the Madhya Pradesh</p>
<b>"Day(s)"</b>	<p>shall mean a 24 (twenty-four) hour period beginning at 00:00 hours Indian Standard Time and ending at 23:59:59 hours Indian Standard Time;</p>
<b>"Delivery Point(s)"</b>	<p>shall mean such points, at such a location mutually agreed by the parties, in line with applicable policy/ regulation/ rules, where solar power is delivered by the Solar Power Developer from the Project to the Procurer, in such a way as to enable measurement of gross energy generated by Project. Multiple Delivery Points are possible even in case of a single Project</p>
<b>"Deemed Generation"</b>	<p>shall mean energy (in kWh) deemed to have been generated per day average from the Project in the same month of previous Year or, if the period of consideration is within the First Contract Year then it shall be calculated as per seasonality index as mentioned in the table of Article 1.30.3; wherein the affected period shall be between 6 am to 6 pm; In no case the Deemed Generation for the Month or part thereof shall be considered more than the total energy consumed by the consumer (solar energy + supply from DISCOM) in that Month or part thereof of the previous Year.</p>
<b>Department(s)</b>	<p>means the Department(s) of Govt. of Madhya Pradesh, whose Premise(s) are would be covered by SPD for installation, commissioning and operation of rooftop solar PV system(s) under net-metering mode.</p>
<b>"Designated Bank Account"</b>	<p>shall mean a Bank Account as notified by Nodal Agency which shall be used for transaction with parties under this RFP;</p>
<b>"DISCOM" or "DISCOM(s)"</b>	<p>shall mean the local distribution licensee/ utility providing electrical distribution and interconnection services at the Premises of the Procurer;</p>
<b>"Dispute"</b>	<p>shall mean any dispute or difference of any kind between Procurer and the Solar Power Developer, in connection with or arising out of this PPA including but not limited to any issue on the interpretation and scope of the terms of this PPA or/ and relevant provisions of RFP;</p>

“District”	means _____ district of the state of Madhya Pradesh.
“District Level Committee or DLC”	shall mean district level committee under chairmanship of Collector of concerned district;
“DREO”	shall mean District Renewable Energy Officer, an authorized representative of Nodal Agency;
"Due Date"	shall have the same meaning ascribed thereto in Article 36 of this PPA;
“Effective Date”	shall have the meaning ascribed thereto in Article 3 of this PPA;
“Electricity Laws”	shall mean the Electricity Act, 2003 and the rules and regulations made there under from time to time along with amendments thereto and replacements thereof and any other Law pertaining to electricity including regulations framed by the Appropriate Commission;
“Elevation”	shall mean the distance of the topmost point of the lower column of the mounting structure from the closest flat surface below the solar panel;
“Equity”	means the sum expressed in INR representing the paid-up share capital of the Solar Power Developer for meeting the equity component of the total project cost and shall include convertible instruments or other similar form of capital, which shall compulsorily convert into equity share capital of the Solar Power Developer and any subordinated shareholder loan.
“Event of Default”	shall mean the events as defined in Articles 55 and 56 of this PPA;
“Execution Date”	shall mean the date of signing of Power Purchase Agreement between Solar Power Developer and the Procurer;
“Expiry Date”	shall mean the date of expiry of this Agreement, which shall not be earlier than the twenty-five (25) Contract Years from the SCOD, unless terminated earlier in accordance with the terms of this Agreement;
Financial Year	means a year commencing on 1 April of any Calendar Year and ending on 31 March of the following Calendar Year.



“Financing Agreements”	shall mean the agreements pursuant to which the Solar Power Developer has sought financing for the Project including the loan agreements, security documents, notes, indentures, security agreements, letters of credit and other documents, as may be amended, modified, or replaced from time to time, but without in anyway increasing the liabilities of Procurer
“First Contract Year”	shall mean the period commencing from following day of the first Unit COD and expiring at the end of the Month in which Project completes twelve(12) Months from the SCOD;  <i>It is clarified that first Unit COD means the commissioning of first Unit of the Project;</i>
“Force Majeure” or “Force Majeure Event”	shall have the meaning ascribed thereto in Article 49 of this PPA;
“Functional / Technical Specifications”	means the technical requirements and parameters described in of this Technical Specifications of PPA and as provided in Grid Code relating to the operation, maintenance and dispatch of the Project;
“Grid Code”/ “IEGC” or “State Grid Code”	shall mean the Grid Code specified by the CERC under Clause (h) of Sub-section (1) of Section 79 of the Electricity Act, as amended from time to time, and/or the State Grid Code as specified by the concerned State Commission, referred under Clause (h) of Subsection (1) of Section 86 of the Electricity Act 2003, as applicable;
GoMP	means the Government of Madhya Pradesh.
“Indian Governmental Instrumentality”	shall mean the Government of India, Governments of state(s) of Madhya Pradesh and any ministry, department, board, authority, agency, corporation, commission under the direct or indirect control of Government of India or any of the above state Government(s) or both, any political sub-division of any of them including any court or Appropriate Commission(s) or tribunal or judicial or quasi-judicial body in India;
“Insurances”	shall mean the insurance cover to be obtained and maintained by the Solar Power Developer in accordance with Article 44 of this PPA;
“Invoice” or “Bill”	shall mean either a Monthly Bill / Supplementary Bill or a Monthly Invoice/ Supplementary Invoice raised by any of the Parties;
Letter of Award	shall mean Letter of Award (LOA) as Successful Bidder as per concerned RfP;

“Late Payment Surcharge”	shall have the meaning ascribed thereto in Article 38 of this PPA;
“Liquidated Damages or LD”	shall mean the penalty levied on the Solar Power Developer in accordance with Article 181.18;
“Law”	shall mean in relation to this PPA, all laws including Electricity Laws in force in India and any statute, ordinance, regulation, notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law and shall further include without limitation all applicable rules, regulations, orders, notifications by an Indian Governmental Instrumentality pursuant to or under any of them and shall include without limitation all rules, regulations, decisions and orders of the Appropriate Commissions;
“Lenders”	means the banks, other financial institutions, multilateral
	agencies, Reserve Bank of India registered non-banking financial companies, mutual funds and agents or trustees of debenture / bond holders, including their successors and assignees, who have agreed as on or before COD of the grid interactive rooftop solar PV Project to provide the Solar Power Developer with the senior debt financing described in the Capital Structure Schedule, and any successor banks or financial institutions to whom their interests under the Financing Agreements may be transferred or assigned: Provided that, such assignment or transfer shall not relieve the Solar Power Developer of its obligations to Procurer under this PPA in any manner and shall also does not lead to an increase in the liability of any of Procurer;
“Meters” or “Metering System”	means meter(s) and metering devices installed by the Solar Power Developer at the Delivery Point(s) for measuring and recording the delivery and receipt of solar energy, as required by a Project as per RFP; They may also include check meter, Net Meter or any other meter in accordance with the prevailing guidelines of the concerned DISCOM, CEA, Policy for Decentralized Renewable Energy System, Madhya Pradesh, MPERC (Grid Interactive Renewable Energy Systems Related Matters) Regulations[Revision-II], 2024. {RG-39(II) of 2024 and their amendments/ substitutions and other agencies;

“Metering Date”	means the Business Day of each calendar month, subsequent to the month in which the solar power is generated by Project, on which the Solar Power Developer takes joint meter reading with the Procurer. The billable units shall be equal to the difference between the meter reading on the Metering Date and the meter reading on the previous month’s Metering Date;
“Maintenance Outage”	shall have the meaning as ascribed to this term as per the provisions of the Grid Code;
"Month(s)"	shall mean a calendar month as per the Gregorian calendar;
MPUVNL	means Madhya Pradesh Urja Vikas Nigam Limited, a GoMP enterprise, which is designated as the nodal agency for implementing GoI and GoMP’s programmes and policies in the renewable energy sector in Madhya Pradesh.
“Nodal Agency”	shall mean Madhya Pradesh Urja Vikas Nigam Limited;
“Normative Project Cost”	shall mean the 85% of the Benchmark Cost;
“Party” and “Parties”	shall have the meaning ascribed thereto in the recital to this PPA;
“Payment Security Mechanism	shall have the meaning ascribed thereto under Article 41 of this PPA read with provisions of RFP;
“Performance Bank Guarantee” or “PBG”	Means the irrevocable, unconditional bank guarantee, to be submitted by the Solar Power Developer to Nodal Agency in the form as mentioned in RFP and which shall include any additional bank guarantee furnished by the Solar Power Developer under this PPA, if any;
“Power Purchase Agreement” or “PPA”	shall mean this Power Purchase Agreement between SPD and respective Procurer(s), including the schedules, amendments, modification and supplements made in writing by the parties from time to time;  <i>For the avoidance of any doubt, it is clarified that SPD selected for a Project (all Units in a District) shall execute a separate PPA with respective Procurer(s) in the District;</i>
“PPA Capacity”	shall mean the total capacity of the Project as per SCHEDULE 7 of the Agreement, which is finalized as per Article 8.2 and 8.3 (Conditions Precedents of SPD) and confirmed by the Nodal Agency through the letter format mentioned in SCHEDULE 5: LETTER FROM NODAL AGENCY CONFIRMING THE CAPACITY;

“Preliminary Default Notice”	shall have the meaning ascribed thereto in Article 57.1 and 58.1 of this PPA;
“Premise(s)”	Means any land, building or structure or part thereof or combination thereof, wherein a separate meter or metering arrangement has been made by the licensee for measurement of electricity;
“Procurer(s)”	shall mean: (a) Individual Drawing and Disbursing Officers (DDO) of concerned Departments where treasury based payment system is followed; or/ and (b) Other authorized person(s) in case of organizations where other than treasury based payment system is followed in [●] district of Madhya Pradesh
“Project”	shall mean the solar energy generation facilities of defined capacity, as per RFP, in District (awarded to the Solar Power Developer pursuant to the Bid Process), developed and owned by the Solar Power Developer, for supply of solar power to identified Sites of District under Net-Metering mode. Project shall include [●] (____) defined number of Sites of various capacities as provided in the Data Room. Each Unit shall supply power for the consumption at the respective Site as per the terms and condition of PPA.  <i>It is clarified that, on the auction screen of the E-bidding Portal, ‘Project’ would be referred to as ‘Entity for Auction’.</i>
“Project Scheduled Commencement of Supply Date” or “Project SCSD” or “SCSD”	shall mean twelve (12) months from Effective Date of the PPA;
“Project Documents”	shall mean Power Purchase Agreement, Bid documents and any other agreements designated in writing as such,
“Proposal Due Date”	means _____._____ for RFP cited in recitals of this PPA above;
“Prudent Utility Practices”	shall mean the practices, methods and standards that are generally accepted internationally from time to time by electric utilities for the purpose of ensuring the safe, efficient and economic design, construction, commissioning, operation and maintenance of power generation equipment and which practices, methods and standards shall be adjusted as necessary, to take account of: a. operation and maintenance guidelines recommended by the manufacturers of the plant and equipment to be incorporated in the Power station; b. the requirements of Indian Law; and c. the physical conditions at the site of the Project;

“Rebate”	shall have the same meaning as ascribed thereto in Article 39 of this PPA;
“RESCO Mode”	shall mean where the Solar Power Developer intend to use a Premise owned/used by the Procurer and enters into the PPA with Procurer for supply of Solar Power for 25 Contract Years at a tariff determined through mutual arrangement or competitive bidding process;
“RFP”	shall mean Request For Proposal No. _____ dated _____.20__, with all its terms and conditions along with all schedules, Annexure and RFP Project Documents attached thereto, issued by Nodal Agency and shall include any modifications, amendments or alterations thereto.
“Rupees” or “Rs”	shall mean Indian rupees, the lawful currency of India;
“Site”	means the identified location provided in the Data Room for installation, commissioning and operation of the rooftop solar PV system(s).  <i>Single site shall be termed as Site and multiple sites shall be termed as Sites</i>
“Solar Power Developer” or “SPD”	means solar power developer, and for the purposes of executing the PPA, will mean:  (a) the SPV incorporated by the Selected Bidder; or  (b) the Selected Bidder itself, if it is a single entity, and not a Consortium or a foreign Company/ LLP/ Partnership Firm/ Sole Proprietor or an LLC and has elected not to incorporate an SPV to implement the Project;  or  (c) Affiliate of the Selected Bidder or its SPV.;
“Special Purpose Vehicle” or “SPV”	means a special purpose vehicle to be incorporated under the (Indian) Companies Act, 2013 by a Selected Bidder;
“Supplementary Bill” or “Supplementary Invoice”	means a bill other than a Monthly Bill or Monthly Invoice raised by any of the Parties in accordance with Article 43;

“Single Window Accounting, Invoicing, and Settlement System” or “SWAISS”	means a single window system (online or otherwise) for solar rooftop systems developed and managed by nodal agency;
“Tariff”	shall have the same meaning as provided for under Article 34 of this PPA;
“Tariff Payment”	shall mean the payments to be made under Monthly Bills as referred to under Articles 34, 35 and the relevant Supplementary Bills in accordance with the Article 43;
“Termination Notice”	shall mean the notice given by either Parties for termination of this PPA in accordance with Article of this PPA;
“Term of PPA”	shall have the meaning ascribed thereto in Article 4 of this PPA;

“Total Debt Amount”	<p>means the sum of the following amounts, expressed in Rupees (with all amounts denominated in currencies other than Rupees being converted to Rupees at the reference Exchange Rate, the selling rate in Rupees for the Foreign Currency on the relevant Day, as notified by the State Bank of India as its TT Rate at 12:00 noon on the date of issuance of Substitution Notice by the Lenders</p> <p>(a) the principal amount of the senior debt incurred by the Solar Power Developer (as per the terms of the Financing agreements) to finance the Project according to the Capital Structure Schedule which remains outstanding on the date of issuance of Substitution Notice by the Lender after taking account of any senior debt repayments which could have been made out of the Monthly Tariff Payments received by the Solar Power Developer on or before the date of issuance of Substitution Notice by the Lender as per the terms provided in the Financing agreements ; and all accrued interest and financing fees payable under the Financing agreements on the amounts referred to in (a) above from the date of supply of power till the date preceding the date of issuance of Substitution Notice by the Lender or, if supply of power has not yet begun, from the most recent date when interest and financing fees were capitalized, and</p> <p>(b) if this PPA is terminated during the Construction Period, any amounts owed to the construction contractor for work performed but not paid for under the construction contract (other than amounts falling due by reason of the Solar Power Developer’s default);</p>
Unavailability of Grid	shall mean any time when the grid is unavailable during solar operational hours starting from 06:00 hrs to 18:00 hrs in a day shall be considered as grid unavailability period;
“Week”	shall mean a calendar week commencing from 00:00 hours Indian Standard Time of Monday, and ending at 23:59:59 hours Indian Standard Time of the following Sunday;
Unit	<p>means the rooftop solar PV system designed, installed, commissioned, and operated by the SPD at a Premise.</p> <p><i>For Clarification, each Site with rooftop solar PV system belonging to Procurer shall be termed as Unit.</i></p>
Unit COD	means date when a Unit achieves commissioning in accordance with the PPA;

Units	means all the Sites, provided in the Schedule-7 , where rooftop solar PV systems of different capacities are proposed to be installed, commissioned and operated by SPD in the Premises of Procurer.  All the Units in a District collectively to be termed as Project with cumulative capacity of [ ____ ] MW;
"Year"	shall mean 365 days or 366 days in case of leap year when February is of 29 Days;

## 2. INTERPRETATION

Save where the contrary is indicated, any reference in this PPA to:

- 2.1. "PPA" shall be construed as including a reference to its Schedules and/or Appendices and/or Annexure;
- 2.2. Unless specifically referred or required otherwise, "Project" shall be construed as including a reference to its "Unit" and/ or "Units" as relevant to context
- 2.3. An "Article", a "Recital", a "Schedule" and a "paragraph / clause" shall be construed as a reference to an Article, a Recital, a Schedule and a paragraph/clause respectively of this PPA;
- 2.4. An "affiliate" of any party shall mean a company that either directly or indirectly controls or is controlled by or is under common control with a SPD of the same person which controls the concerned party; and control means ownership by one company of not less than fifty one percent (51%) of the voting share of the other company;
- 2.5. A "Crore" means a reference to ten million (10,000,000) and a "Lakh" means a reference to one tenth of a million (1,00,000);
- 2.6. An "encumbrance" shall be construed as a reference to a mortgage, charge, pledge, lien or other encumbrance securing any obligation of any person or any other type of preferential arrangement (including, without limitation, title transfer and retention arrangements) having a similar effect;
- 2.7. "Indebtedness" shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;
- 2.8. A "person" shall be construed as a reference to any person, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and a person shall be construed as including a reference to its successors, permitted transferees and permitted assigns in accordance with their respective interests;
- 2.9. "Rupee", "Rupees", "INR" or "Rs" shall denote Indian Rupees, the lawful currency of India;
- 2.10. The "winding-up", "dissolution", "insolvency", or "reorganization" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings



under the Law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding-up, reorganization, dissolution, arrangement, protection or relief of debtors;

- 2.11. Words importing the singular shall include the plural and vice versa;
- 2.12. This PPA itself or any other PPA or document shall be construed as a reference to this or to such other PPA or document as it may have been, or may from time to time be, amended, varied, novated, replaced or supplemented;
- 2.13. A Law shall be construed as a reference to such Law including its amendments or re-enactments from time to time;
- 2.14. A time of Day shall, save as otherwise provided in any PPA or document be construed as a reference to Indian Standard Time;
- 2.15. Different parts of this PPA are to be taken as mutually explanatory and supplementary to each other and if there is any inconsistency between or among the parts of this PPA, they shall be interpreted in a harmonious manner so as to give effect to each part;
- 2.16. The tables of contents and any headings or sub-headings in this PPA have been inserted for ease of reference only and shall not affect the interpretation of this PPA;
- 2.17. All interest, if applicable and payable under this PPA, shall accrue from Day to Day and be calculated on the basis of a Year;
- 2.18. The words “hereof” or “herein”, if and when used in this PPA shall mean a reference to this PPA;
- 2.19. The terms “including” or “including without limitation” shall mean that any list of examples following such term shall in no way restrict or limit the generality of the word or provision in respect of which such examples are provided;
- 2.20. In case of discrepancy between Day(s)/ Week(s)/ Month(s)/ Years(s) written in numeric and words, numbers written in words shall prevail.

## **TERM OF PPA**

### **3. EFFECTIVE DATE**

- 3.1. This PPA shall come in to force from the Execution Date of the PPA. Rest of the PPA shall come into effect from the date of accomplishment of all the conditions precedent mentioned in Article 1.7 and 1.8 and such date shall be referred to as the Effective Date.

### **4. TERM OF PPA**

- 4.1. This PPA, subject to Article 5 and 6, shall be valid for a term from the Effective Date until the Expiry Date.

### **5. EARLY TERMINATION**

- 5.1. This PPA shall terminate before the Expiry Date if either Procurer or Solar Power Developer terminates the PPA pursuant to Article 55 to 60.

### **6. SURVIVAL**

- 6.1. Notwithstanding anything to the contrary herein, the expiry or termination of this PPA shall not affect any accrued rights, obligations and liabilities of the Parties under this PPA, including the right to receive penalty as per the terms of this PPA, nor shall it affect the survival of any continuing obligations for which this PPA provides, either expressly or by necessary implication, which are to survive after the Expiry Date or termination including those under Article 13, 44 (Insurance), 10 and 18 (Liquidated Damages), 47 (Force Majeure), 55 to 58 (Events of Default), 59 to 60 (Termination), 61 to 64 (Liability and Indemnification), 72 (Governing Law and Dispute Resolution), 88 to 106 (Miscellaneous Provisions), and other Articles and Schedules of this PPA which are indispensable for survival or amicable settlement of events and transactions pursuant to this PPA.

## **CONDITION PRECEDENT**

### **7. CONDITION PRECEDENT OF THE PROCURER AND THE NODAL AGENCY**

- 7.1. Pursuant to Article 8.2, the Nodal Agency, based on assessment of SPD's submission, shall issue a letter to the SPD and the Procurer on final approved capacity namely "Approval of PPA Capacity", within ten (10) Days from the receipt of SPD's letter of request.
- 7.2. Procurer should provide the seal and signed undertakings / acknowledgements / letters / applications and any documentary evidence that supports the SPD in completing its Condition Precedents as advised by the Nodal Agency.
- 7.3. At the time of net metering application, Procurer shall ensure that there should not be any outstanding electricity dues with the concerned DISCOM.
- 7.4. Procurer has appointed an officer as Special Point of Contact ("SPOC") as provided at Article 69, with whom the Nodal Agency and the SPD shall directly communicate for the facilitation of the project. It is the responsibility of the Procurer to appoint another individual as SPOC in case the previous SPOC is unavailable.
- 7.5. Procurer shall have the obligations to fulfill its Condition Precedents listed in this Article as above.

## **8. CONDITION PRECEDENT OF THE SOLAR POWER DEVELOPER**

- 8.1. Within thirty (30) Days from the execution date, the SPD shall undertake detailed and comprehensive site survey to verify the Data Room that is made available in the RfP. The parameters used to assess the capacity have been outlines in the Data Room formats.
- 8.2. If there is a change in the Project's PPA capacity, within two (2) Days from the completion of assessment under Article 8.1, SPD shall submit a "letter of request", with due analysis and relevant documents, to the Nodal Agency and the Procurer. The capacity of the Project under this PPA may increase or decrease subject to Nodal Agency's approval based on the analysis submitted by the SPD..
- 8.3. Consequent to Articles 7.3, 7.6 and 8.2, if there is any change in PPA Capacity allowed, incremental PBG, other that already submitted as per RfP, as per revised value/ Project Capacity shall be submitted to Nodal Agency within fifteen (15) Days from the confirmation of the PPA Capacity by the Procurer and Nodal Agency both.
- 8.4. The date of submission of the PBG of the required value after fulfillment of all the Condition Precedents as mentioned in Articles 7 and 8 above would be termed as Effective                      Date                      of                      the                      PPA.

## **9. CONSEQUENCES OF NON-FULFILMENT OF CONDITIONS PRECEDENT**

- 9.1. If the SPD fails to complete the conditions precedents mentioned in Article 8 of this PPA. Nodal Agency shall take necessary actions in line with Article 10, wherein the PBG submitted by the SPD may be forfeited and the PPA may be terminated, unless the delay is due to the non-compliance of the Nodal Agency and/ or the Procurer under Article 7.
- 9.2. In a situation wherein the SPD is unable to complete its Condition Precedents due to the non-compliance of the Procurer/ Nodal Agency to the Article 7 or some Sites provided at SCHEDULE 7, it is the responsibility of the SPD to intimate the occurrence of such events to the Nodal Agency within thirty (30) Days. The Nodal Agency in such case would assess the situation after discussion with both the SPD and the Procurer. In case the situation can be rectified and both parties agree to actively resolve the issues, the Nodal Agency, in consultation with Procurer, may provide an appropriate extension up to a certain date which shall not be more than three (3) months from the Execution Date. At the end of the same, SCHEDULE 7 may be suitably amended or the PPA may be terminated.
- 9.3. If the incremental PBG as per the revised value/ Project Capacity as per Article 8.3 is not submitted, it shall be considered  
  
as "Refusal to Execute the PPA" and Article 10 of the PPA shall be applicable.
- 9.4. SPD shall be entitled for an extension for delay on account of the delay by Nodal Agency and the Procurer pursuant to Article 9.1 and 9.2. Non-compliance on behalf of the Procurer that result into delays in fulfillment of the condition precedent by the SPD beyond the extension provided by Nodal Agency pursuant to Article 9.2, shall lead to termination of PPA, and PBG for the Project shall be returned to the SPD.
- 9.5. In case of termination of PPA pursuant to Article 9.3 or 9.4, both the parties shall be relieved from their responsibilities and no party shall be liable to make any payment to

the other party except as per provisions of Article 9.3.

**10. LIQUIDATED DAMAGES ON NON-COMPLIANCE DURING THE PERIOD FROM  
EXECUTION DATE TILL EFFECTIVE DATE**

- 10.1. In case of failure of adhering in submission of incremental PBG or requisite details as mentioned in Article 8.3 of Condition Precedents, Liquidated Damages shall be imposed on SPD at the rate of 1% of incremental PBG and PBG respectively per week of delay or part thereof. Procurer in consultation with the Nodal Agency may terminate the PPA in case the SPD does not submit details of any of the sites within ten (10) Weeks from the Execution Date. In such cases, the Nodal Agency shall forfeit the complete PBG.
- 10.2. SPD shall be required to submit incremental PBG as per revised value/ Project Capacity after change in PPA Capacity, if any, within thirty (30) Days from the fulfillment of all the CPs of SPD or Effective Date, whichever is earlier.

## **CONSTRUCTION AND INSTALLATION OF THE SYSTEM**

### **11. CONDITION SUBSEQUENT OF THE PROCURER**

- 11.1. Provide with seal and sign undertakings / acknowledgements / letters / applications and any documentary evidence that supports the SPD in completing its condition subsequent.
- 11.2. Timely payment of Additional Works as defined in the SCHEDULE 1: SCOPE OF WORK within fifteen (15) Days of raising the invoice by SPD, until the COD or as mutually agreed between the parties
- 11.3. Provide unrestricted access to SPD and their contractors for construction related activities under this PPA.

### **12. CONDITION SUBSEQUENT OF THE SOLAR POWER DEVELOPER**

- 12.1. Submit Project design and drawings to the Procurer and Nodal Agency within [sixty (60)] Days from the Effective Date.
- 12.2. SPD shall have sent a written notice, within [thirty (30)] Days from the Effective Date, to Procurer and Nodal Agency indicating the major Milestones to achieve the COD (in the format provided in SCHEDULE 4: COD SCHEDULE).
- 12.3. Successful COD of the Project within twelve (12) Months from the Effective Date of PPA unless there is an extension provided as per Article 26 and there are delays attributable to the reasons listed therein.
- 12.4. SPD shall be accountable for submission of below mentioned details to Nodal Agency, copying Procurer, to apply for the completion of the project:
  - i. Project layout/drawing, Single line diagram.
- 12.5. Submitting the details of Lender(s) including the Name of Contact Person, its Phone Number and official mail ID within five (5) Months from the Effective Date or one (1) Month prior to SCSD, whichever is early.

### **13. CONSEQUENCES OF NON-FULFILMENT OF CONDITIONS SUBSEQUENT**

- 13.1. In case of delay by the Procurer to fulfill any one or more of the conditions specified in Article 11 due to any Force Majeure event, the time period for fulfillment of the conditions subsequent as mentioned in Article 11 shall be appropriately extended. Further, any delay in the fulfillment of Conditions Subsequent as mentioned under Article 11 due to reasons attributable to the Procurer shall lead to appropriate extension in time period for fulfillment of the Conditions Subsequent by the SPD as mentioned in Article 12.3. In such cases, SPD must have sent a written notice to Procurer and Nodal Agency for extension in SCSD. Once the SPD gets the appropriate extension in SCSD, SPD shall submit the revised indicative timelines to complete the remaining major milestones along with extended SCSD.
- 13.2. Save for Article 13.1 and 26, in case of a failure to meet the requirements mentioned under Article 12, the Nodal Agency on behalf of the Procurer shall impose Liquidated Damages in accordance with Article 18 as directed by the Competent Authority.

However, in case the delay in meeting the SPD's Conditions Subsequent as stated in Article 12 due to the reasons attributable under Article 26 and the Procurer not fulfilling its obligations as stated in Article 15, the SPD shall be provided with appropriate extension without any LD / penalty. It is the responsibility of the SPD to highlight the challenges they are facing in the quarterly progress report and proactively seek solution from the Nodal Agency or the Power Procurer in a timely manner."

- 13.3. In case of construction work doesn't get started at the site in the given time extension by the SPD, due to unresolved dispute between SPD & Procurer, Nodal agency after due consultation with both SPD and Procurer reserves the right to terminate the PPA or amend SCHEDULE 7 on behalf of SPD/Procurer as and when it find required and necessary.

#### **14. SOLAR POWER DEVELOPER'S OBLIGATIONS**

- 14.1. The SPD undertakes to be responsible, at its own cost and risk, for:

- i. all approvals including Consents required under local regulations, building codes and approvals required from DISCOMs etc. relating to installation and operation of the Project and generation and supply of solar power from the Project to Procurer and maintain the same in full force and effect during the Term of this PPA and Indian Law, as required and relevant. SPD shall update Nodal Agency each month on the status of the approvals in the quarterly progress report. In case the SPD is facing any difficulties in obtaining any approval it can request Nodal Agency for timeline extension for the specific approval.
- ii. supply to Procurer promptly with copies of each application that it submits to relevant authorities, and copy/ies of each Consent/ license which it obtains. For the avoidance of doubt, it is clarified that the SPD shall be solely responsible for maintaining/ renewing any Consents and for fulfilling all conditions specified therein during the Term of the PPA.
- iii. design, engineering, supply, finance, erection and Commissioning along with O&M of the grid interactive rooftop solar PV Project along with supply of power, with desired level of performance, for a period of twenty-five (25) Contract Years of Project in accordance with the applicable Law, the Grid Code and the terms and conditions of this PPA and those prescribed in RFP.
- iv. save for Article 26, commencing the supply of power for the PPA Capacity to Procurer no later than the SCSD and continuance of the supply of power throughout the Term of PPA.
- v. operate and maintain the Project throughout the Term of PPA free and clear of encumbrances, except those expressly permitted under this PPA.
- vi. maintaining its controlling shareholding prevalent at the time of signing of PPA up to First Year in accordance with the RFP.
- vii. fulfilling all obligations undertaken by the SPD under this PPA, read in conjunction with terms and conditions of RFP;
- viii. upon Termination, it shall be the responsibility of the SPD to transfer the Project to the Procurer free of all encumbrances and at zero cost.
- ix. ensure operations of the Project in a prudent utility basis with an objective of regular power supply to Procurer.
- x. submission of Project Manager's name, within fifteen (15) Days from the Effective

Date, to the Procurer and Nodal Agency, who will act as a single point of contact for future communication.

- xi. submit a quarterly progress report during Construction Period (from Effective Date to COD of last Unit) to Nodal Agency, copying Procurer, within first seven (7) days of the subsequent month.

## **15. PROCURER'S OBLIGATIONS**

- 15.1. The Procurer shall be responsible to fulfill obligation undertaken by it, including those required as facilitation for installation of Project at the Premises of Procurer, under this PPA at its own cost and risk.
- 15.2. Provide access to Nodal Agency, SPD and their contractors to the Premises for project implementation and commissioning and for regular operation and maintenance of the Project.
- 15.3. Ensure that there is no outstanding electricity dues with the DISCOM it has its connection with during the Construction Period.
- 15.4. Provide access to Project Lenders and Lenders Representatives during the tenor of the loan facility. In case where the Procurer and Building Owner are different, then similar undertaking for access to premises in favour of Lenders has to be provided by the Building Owner.
- 15.5. Procurer should not have any lien over the assets financed by Banks like solar modules, inverters, etc. on the procurer's rooftop as those assets belong to the lenders financing the Project.
- 15.6. Regularly pay bills for power off take as per the Monthly Bills submitted by the SPD.
- 15.7. Pay the Termination Payment or any other dues, if required, as per the terms of PPA.



## 16. BANK GUARANTEES

### 16.1. Performance Bank Guarantee (PBG)

- i. The SPD shall furnish PBG of Rs. twenty five hundred (2,500) /kW in accordance with provisions of RFP. The performance security of each PPA shall be issued in favour of concerned Procurer (i.e. concerned DDOs of the Department) and in the format set out in the PPA.
- ii. Incremental PBGs, if applicable, shall be valid till fifteen (15) Months from the Effective Date with a further claim period of six (6) Months or required to be extended as deemed necessary. Failure to submit incremental PBG, as above, without sufficient justification acceptable to the Nodal Agency, shall be considered as not honouring the PPA and the Nodal Agency shall have right to forfeit the PBG.
- iii. Nodal Agency shall release PBG to SPD within three (3) Months from last Unit COD.
- iv. Further, in case of delay in achieving/fulfilling any milestone as mentioned in SCSD Schedule or as per Conditions Subsequent or as per Condition Precedent under the PPA, Liquidated Damages would be recovered against the PBG.

## 17. SOLAR POWER DEVELOPER'S CONSTRUCTION RESPONSIBILITIES

- 17.1. The SPD shall be responsible for design, engineering, supply, finance, erection, testing and Commissioning along with Comprehensive Operation & Maintenance of the grid interactive rooftop solar PV Project, with desired level of performance, for a period of 25 Contract Years of the Project in accordance with the following, it being clearly understood that in the event of inconsistency between two or more of the following, the order of priority as between them shall be the order in which they are placed, with 'applicable law' being the first:
  - i. Applicable Law;
  - ii. the Grid Code;
  - iii. the terms and conditions of this PPA;
  - iv. the Functional Specifications as per RFP; and
  - v. Prudent Utility Practices.
- 17.2. Notwithstanding anything to the contrary contained in this PPA, the SPD shall ensure that the technical parameters or equipment limits of the Project shall always be subject to the requirements as specified under Article 17.1 and under no event shall over-ride or contradict the provisions of this PPA and shall not excuse the SPD from the performance of his obligations under this PPA.
- 17.3. Construction, Installation and Commissioning of the Project
  - i. The SPD will be responsible for design, engineering, supply, finance, erection and Commissioning along with O&M of the grid interactive rooftop solar PV Project, with desired level of performance, for a period of 25 Contract Years in accordance with this PPA/ RFP.

- ii. The SPD shall have access to Premises , as reasonably permitted by the Procurer, to perform the works related to Construction, Commissioning and O&M during the Term of PPA at the Premises in a manner that minimizes inconvenience to and interference with the use of the Premises to the extent commercially practical for the purpose of the Project.
- iii. Unless otherwise agreed between the Parties, the SPD shall not do (a) chipping of rooftop; or (b) disturb water proofing of roof (c) carry out any other modification of the Premises without the written consent of the Procurer. One-time cost for strengthening of Premise to the extent required for setting up Solar PV Project during construction shall be borne by Procurer. In case of any ambiguity, SPD and Procurer shall involve Nodal Agency to get the clarity on the roof strengthening works. Cost of repair or maintenance of Premise to the extent required for the Solar PV Project, during the O&M of Project, shall be the responsibility of SPD, other than cost required for water proofing. The cost for water proofing will be the responsibility of SPD for a period of first three (3) Contract Years.
- iv. The SPD shall provide and lay the dedicated electrical cables for delivery of solar power from the Project up to the Delivery Point(s), which shall be behind the DISCOM meter. Distribution of solar power beyond Delivery Point(s) will be the responsibility of the Procurer in accordance with this PPA.
- v. The SPD shall maintain general cleanliness of area around the Project during construction and operation period, i.e. Term of the PPA of the Project. In case any damages is caused to the equipment / facilities owned by the Procurer due to the SPD, the same shall be made good / rectified by the SPD at its risk and cost.
- vi. Subject to any punch-list items which shall be agreed by the Procurer as not being material to COD of the Project, the SPD agrees that it shall achieve the COD of the Project within twelve (12) months from Effective Date of this agreement ("SCSD").
- vii. At the time of Commissioning, Procurer shall ensure that sufficient load is available at the Delivery Point(s) to ensure synchronization and drawl of power from the Project.
- viii. Procurer, in coordination with SPD, shall ensure that all arrangements and infrastructure for transmission or/ and distribution of solar power beyond the Delivery Point(s) are ready on or prior to the COD and is maintained in such state in accordance with applicable laws through the Term of PPA.

17.4. Change in Capacity during Construction Period:

- i. After the approval received by SPD under Article 7 and 8 on PPA Capacity, SPD may request for change in Capacity for any of the projects in SCHEDULE 7 of the PPA. Nodal Agency is responsible to verify the propose change in PPA Capacity and approve accordingly within fifteen (15) Days from the receipt of the request.
- ii. SPD request letter for change in PPA Capacity should consist of Change in PPA Capacity, Procurer's consent and total timeline extension required in SCSD. SPD should detail out the reasons for seeking change in PPA Capacity and timeline extension in SCSD.
- iii. Nodal Agency shall verify the SPD's request and issue the Change in PPA

Capacity letter to SPD, copy to Procurer, which will become the Annexure II (as per the format given in Schedule V) of PPA and becomes the integral part of PPA.

- iv. In case of multiple changes in PPA Capacity during the Construction Period, every such letter issued to SPD shall become the Annexure of PPA and that Annexure becomes the integral part of PPA.
- v. Procurer has right to object to any change in PPA Capacity as approved by the Nodal Agency, if any, within five (5) days from the issuance of letter to SPD. If there is no objection raised by the Procurer, it is considered as deemed acceptance of the Procurer.
- vi. Due to change in PPA Capacity, Nodal Agency and Procurer together has right to grant time extension in SCSD under the PPA based on the additional work or difficulties in implementation due to site availability.

## **18. LIQUIDATED DAMAGES**

- 18.1. In case of natural calamity or any reason beyond the control of SPD or unavoidable circumstances, the work is not completed within the given timeframe, Nodal Agency may consider grant of extension after the reason submitted by SPD are found to be satisfactory, Delay in receipt of equipment of Solar System like solar panel, PCU, etc. from the vendors, to whom the Bidder has placed order, shall not be considered as a reason for extension.
- 18.2. If the SPD fails to execute the work and Commission the project on or before the SCSD for the reasons other than that mentioned under Article 26.1, Nodal Agency shall have the right to impose penalty equivalent to 1% of PBG value per two week from the SCSD subject to maximum of twenty (20) Weeks delay. In case of delay beyond extended timeline of twenty (20) Weeks, Nodal Agency may
  - i. allow SPD to work with additional penalty up to ten (10) more Weeks. SPD shall be required to submit additional PBG of 5% of earlier PBG value, prorated for Project Capacity, in the form as mentioned in Article 16.1. LD of 1% of additional PBG per two week or part thereof shall be levied on SPD.
  - ii. If COD is not achieved within second granted extended time period as per Article 18.2 (i), Nodal Agency shall forfeit the additional PBG and request Procurer to terminate the PPA.
  - iii. Nodal Agency shall pay the total LD collected to the Procurer within sixty (60) Days from the .
- 18.3. SPD shall be responsible for completion of all activities mentioned in SCSD schedule within the given time frame. SPD shall include the detail of SCSD and expected COD schedule in the quarterly progress report.
- 18.4. Progress in the implementation of the Project shall be monitored by Nodal Agency for milestones mentioned in COD Schedule.

## **19. MEASURING CUF**

- 19.1. SPD shall ensure that all Project are Remote Monitoring System ("RMS") enabled. The data from such RMS enabled Project would be monitored or analysed remotely by Nodal Agency, independently or at its Centralized Monitoring Centre. The SPD shall support

Nodal Agency or its authorised representatives in establishing technical handshake between RMS and the Centralized Monitoring Centre. The internal data logger of the RMS system shall work on store-and-forward mechanism. It should be able to store data in case of connectivity outage and forward the stored data once the connectivity is attained. The SPD shall ensure data for a minimum period of one Year is stored in the data logger. The RMS system must also be capable of interfacing with external data loggers as may be installed by the Nodal Agency or its authorised representatives at no extra cost. The SPD shall ensure that the connectivity of the Project with the Centralized Monitoring Centre of Nodal Agency is uninterrupted at all times during O&M period and shall make all necessary arrangements for the same. In addition to the above, the SPD shall ensure and shall have no objection to provide access to RMS and / or any other medium used to transfer data for data acquisition and monitoring the performance of Project(s) by Nodal Agency and the Procurer. Nodal Agency and the Procurer or their authorized agency reserves right to validate the authenticity of such data for which SPD shall extend full access and its cooperation.

- 19.2. Performance of RMS System:- The RMS should have ability to send data on defined internal time so that data should not be lost due to performance and load issue. The information should be shared with trusted system only and should not be available to any other unknown system. The SPD must ensure the yearly availability and connectivity of the RMS system to be at least 99%.

## **20. PROJECT COMPREHENSIVE OPERATION & MAINTENANCE (COMPREHENSIVE O&M)**

- 20.1. SPD shall operate and maintain Project, with desired level of performance, during the Term of PPA, read with terms and conditions of RFP, at its sole cost and expenses; provided, that any repair or maintenance costs incurred by the SPD as a result of Procurer's negligence or breach of its obligations hereunder, as certified by Nodal Agency, shall be reimbursed in full by the Procurer. The timelines for O&M would be 6 A.M. to 6 P.M. or any other time as mutually decided between Procurer and the SPD.
- 20.2. Procurer shall not undertake any O&M activity related to Project. SPD shall ensure that Project is adequately maintained and operated to serve the purpose envisaged in PPA and RFP.
- 20.3. The SPD will have to arrange all required instruments, tools, spares, components, manpower and other necessary facilities at his own cost. It is advisable for the SPD to ensure proper arrangements for cleaning of panels in order to maintain the requisite performance expectations.

## **21. SOLAR POWER DEVELOPER'S DEFECT LIABILITY**

- 21.1. If it shall appear to the Nodal Agency that any supplies have been executed with unsound, imperfect or unskilled workmanship, or with materials of any inferior quality, the SPD shall forthwith rectify or remove and replace that item so specified and provide other proper and suitable materials at its own charge and cost if so desired by Nodal Agency in writing.
- 21.2. The SPD shall also be undertaking the operation and maintenance of the project and consequently shall be required to rectify any defects within seventy-two (72)Hours that emerge during the O&M of the Project for the Term of the PPA.

## **22. PROJECT DISRUPTIONS**

### **22.1. Unavailability of Premises**

- i. If, for reasons other than the SPD's breach of its obligations under this PPA and/or RFP, SPD is not provided with the access to the Premises as necessary to operate and maintain the Project, such time period shall be excluded from the calculation of generation.
- ii. If, for reasons other than the SPD's breach of its obligations under this PPA and/or RFP, energy generation from Project is hampered significantly or stopped, such time period shall be excluded from the calculation of generation.
- iii. Period during which the grid is unavailable due to power cut or grid is unstable during generation hours and in turn leading to lower generation, such hours shall be excluded for the purpose of calculation of generation.
- iv. Procurer shall continue to make all payments for the solar power during such period of Project disruption other than Article 22.1 at same Tariff as applicable for the period of Project disruption ("Disruption Period"). For the purpose of calculating solar power payments and lost revenue for such Disruption Period, Deemed Generation shall be considered for calculation of lost revenue or payment obligation of Procurer. Loss in revenue for the Disruption Period would be multiplication of Tariff of that Contract Year and difference in Deemed Generation and Actual Generation over such period. SPD shall inform about the disruption or outage in Project, for reasons attributable to Procurer in writing with date and time of such occurrence, and Procurer's liability shall start from the date of intimation of disruption or outage in the rooftop system, on account of Procurer.

### **22.2. Roof repair and other Project disruptions**

- i. In the event that (i) the Procurer repairs the Premises' roof for any reason not directly related to damage, if any, caused by the Project, and such repair requires the partial or complete temporary disassembly or movement of Project, or (ii) any act or omission of Procurer or Procurer's employees, affiliates, agents or subcontractors (collectively, a "Procurer Act") results in a disruption or outage in Project's power generation, and such events are attributable to Procurer except Force Majeure, then, in either case, Procurer shall:
  - a. Pay the SPD such amount of money as prudently determined and agreed by and between SPD and the Procurer for all work required by the SPD to disassemble or move or shifting the Project. The costing would be at mutually decided rate or latest Schedule of Rates (SOR) published by concerned DISCOM or any authorised agency, whichever is lower for similar works; and
  - b. Continue to make all payments for the solar power during such period of Project disruption at same Tariff as applicable for the period of Project disruption ("Disruption Period"). For the purpose of calculating solar power payments and lost revenue for such Disruption Period, Deemed Generation shall be considered for calculation of lost revenue or payment obligation of Procurer. Loss in revenue for the Disruption Period would be multiplication of Tariff of that Contract Year and difference in Deemed Generation for number of days such event occurs and Actual Generation. SPD shall inform about the disruption or outage in Project, for reasons attributable to Procurer in writing with date and time of such occurrence, and Procurer's liability shall start from the date of intimation of disruption or outage in system production, on account

of Procurer.

- ii. If any structures within the Procurer's premise partially or wholly shade any part of the Project after the two (2) Months of COD, the SPD may apply for Deemed Generation furnishing the calculation for loss in revenue due to such shading supported by the relevant data, which shall be approved by Procurer within one month of submission, failing which the SPD shall claim provisional Deemed Generation till the issue is finally settled.

Calculation for loss in revenue for the period = (Deemed Generation X number of Days such event occurs - Actual generation) X Tariff of that Contract Year.

- iii. The SPD is responsible for the waterproofing of the roof disturbed/ pierced for installation of Project for the O&M period of first three (3) Contract Years. The SPD should immediately take necessary action to repair any damage to the water proofing. However, in such situations, SPD shall bear any loss or damage to Project and rectify the same within reasonable timeframe but any generation loss in such eventualities shall not be passed on to Procurer. If SPD fails to do required water proofing within seven (7) Days from the day of identification of issue, Procurer may get the same done at prevailing market rate and SPD shall reimburse the same to Procurer. If the SPD fails to reimburse the expenses to the Procurer then such expenses shall be adjusted by the Procurer from the solar generation Monthly Bills of future Months or as mutually agreed.

## **23. QUALITY OF WORKMANSHIP**

- 23.1. The SPD shall ensure that the Project is designed, built and completed in a good workman like manner using sound engineering construction practices and using only materials and equipment that are new and of international utility grade quality such that, the useful life of the Project will be till the Expiry Date.
- 23.2. The SPD shall ensure that design, construction and testing of all equipment, facilities, components and systems of the Project shall be in accordance with Indian Standards and Codes issued by Bureau of Indian Standards (BIS)/ International Electro technical Commission (IEC) .

## **24. CONSTRUCTION DOCUMENTS**

- 24.1. The SPD shall retain at the Premises and make available for inspection to Procurer and the Nodal Agency or its authorized agency at all reasonable times, copies of the results of all tests specified in Tariff Schedule hereof.

## **25. DELIVERY OF SOLAR POWER**

- 25.1. Purchase Requirement
  - i. Procurer agrees to purchase solar energy generated by each Unit of respective Project and made available by the SPD to Procurer at the Delivery Point(s), during each Contract Year of the Term of PPA.
- 25.2. Suspension of Delivery

The SPD shall be entitled to suspend delivery of electricity from the Project to the

Delivery Point(s) for the purpose of maintaining and repairing the Project upon giving notice of at least three (3) Days in advance to the Procurer, except in the case of emergency repairs. Such suspension of service shall not constitute a breach of this PPA, provided that the SPD shall use commercially reasonable efforts to minimize any interruption in service to the Procurer. However, any preventive maintenance shall be done only during the period when Project is not generating.

25.3. Title to the Project

Throughout the duration of the PPA, the SPD shall be the legal and beneficial owner of the Project at all times, and the Project shall remain a property of the SPD and shall not attach to or be deemed a part of, or fixture to, the Premises. The title to the Project will be transferred to the Procurer at Termination of the PPA at the end of the Term (i.e. after completion of twenty-five (25) Contract Years) within thirty (30) Days. The title to be transferred to Procurer free of all encumbrances and at zero cost to the Procurer

**26. EXTENSIONS OF TIME**

26.1. In the event that the SPD is prevented from performing its obligations under Article 1.14 by the SCSD due to:

- i. any Procurer Event of Default; or
- ii. Force Majeure Events affecting Procurer; or
- iii. Force Majeure Events affecting the SPD; or
- iv. Any SCSD extension granted under Article 17.3

The SCSD shall be deferred, subject to the limit prescribed in Article 26.2, for a reasonable period but not less than 'Day for Day' basis, to permit the SPD or Procurer through the use of due diligence, to overcome the effects of the Force Majeure Events affecting the SPD or Procurer, or till such time such Event of Default is rectified by Procurer.

26.2. Subject to Article 26.6 and 26.7, in case of extension occurring due to reasons specified in Article 26.1(i) and 26.1iv, any of the dates specified therein can be extended, subject to the condition that the SCSD would not be extended by more than one (1) Year.

26.3. In case of extension due to reasons specified in Article 26.1(ii) and 26.1(iii), and if such Force Majeure Event continues even after a maximum period of six (6) Months, any of the Parties may choose to terminate the PPA as per the provisions of Article 59.

26.4. If the Parties have not agreed, within fifteen (15) Days after the affected Party's performance has ceased to be affected by the relevant circumstance, on the time period by which the SCSD should be deferred by, any Party may raise the Dispute to be resolved in accordance with Articles 72, 73 and 74.

26.5. As a result of such extension, the SCSD newly determined shall be deemed to be the SCSD for the purposes of this PPA.

26.6. Notwithstanding anything to the contrary contained in this PPA, any extension of the SCSD arising due to any reason envisaged in this PPA shall not be allowed beyond one (1) Year or the Date determined pursuant to Articles 26.2 or/ and 26.3, whichever is later.

- 26.7. For getting extension of time under Article 26.1, SPD shall notify Nodal Agency and Procurer, at least fifteen (15) Days in advance of SCSD, and detailed out the probable reasons for delay.

## **27. INSPECTION/ VERIFICATION**

- 27.1. The SPD shall be further required to provide entry into the Premises of the Project to Procurer and Nodal Agency at all times during the Term of PPA.

The Lenders and Lender's Representatives shall be provided access to the Premises of the project by the Procurer/Building Owner (as the case may be) so as to enable Lenders to conduct regular site inspection.

- 27.2. Nodal Agency shall be responsible for inspection and verification of the Project works being carried out by the SPD at the Premises. If it is found that the construction works/ operation of the Project is not as per RFP/ PPA, it may seek clarifications from SPD or require the works to be stopped or to comply with the instructions of Nodal Agency.



## SYNCHRONISATION, SYSTEM ACCEPTANCE TESTING AND COMMISSIONING

### 28. SYNCHRONIZATION

- 28.1. The SPD shall give the concerned DISCOM, Nodal Agency and Procurer at least Thirty (30) Days advanced preliminary written notice and at least Fifteen (15) Days advanced final written notice, of the date on which it intends to synchronize the Project.
- 28.2. Subject to Article 28.1, the Project may be synchronized by the SPD when it meets all the connection conditions prescribed in applicable Grid Code then in effect and otherwise meets all other Indian legal requirements for synchronization to the Grid. Prior to synchronization of the Project, the SPD shall be required to get the Project certified for the requisite acceptance/ performance test by CEIG.
- 28.3. The synchronization equipment shall be installed by the SPD at its generation facility of the Project at its own cost. The SPD shall synchronize its Project with the DISCOM grid only when the approval of synchronization scheme is granted by the concerned DISCOM and checking/verification is made by the concerned authorities of the DISCOM.

### 29. COMMISSIONING OF THE PROJECT

- 29.1. Injection of power following Net Metering would be considered proof of commissioning of the Unit(s)/ Project.
- 29.2. Subject to any relaxation or waiver by Nodal Agency, Commissioning of Unit(s)/ Project would be considered when full Capacity of the Unit(s)/ Project is commissioned.

### 30. SYSTEM ACCEPTANCE TESTING AND COMMISSIONING

- 30.1. For successful Commissioning of the Unit(s)/ Project, SPD shall demonstrate that the Project delivers Capacity Utilization Factor ("CUF") of at least fifteen percent (15%) on any selected day by the SPD, adjusted for seasonality as tabulated below.

Month	Generation per kW per Day by the project (kWh)
January	3.71
February	4.14
March	4.33
April	4.27
May	3.99
June	3.30
July	2.56
August	2.33
September	3.21

<b>October</b>	3.89
<b>November</b>	3.90
<b>December</b>	3.56

- 30.2. If the results indicates that the Unit(s)/ Project is capable of generating solar energy and produces the required CUF on a Day in a Month as per Article 30.3, in accordance with the applicable rules/regulation/policies, as prescribed in RFP, SPD shall send a written notice to Nodal Agency, with a copy to Procurer, to that effect, and the date of successful conducting such tests and injection of solar power at Delivery Point(s) shall be the “Commercial Operation Date” as certified under RFP and/or PPA.
- 30.3. The SPD shall undertake a Commissioning in accordance with the provisions of Scope of Work as mentioned in SCHEDULE 1: SCOPE OF WORK of the PPA, as soon as reasonably practicable [and in no event later than two (2) Weeks or such longer period as mutually agreed between the SPD and Procurer after the point at which it is no longer prevented from doing so by the effects of Force Majeure Events or Procurer’s Event of Default (as appropriate and applicable)] and if such Commissioning of PPA Capacity is not duly completed on or before the SCSD, SPD shall be required to pay Liquidated Damages to Nodal Agency in accordance with Article 18.
- 30.4. SPD starts injecting power from the Unit(s)/ Project to the Delivery Point(s) from the day of Commissioning.
- 30.5. The SPD expressly agrees that all costs incurred by it in synchronizing, connecting, and/ or Commissioning Unit(s)/ Project shall be solely and completely to its account and Procurer has no liability other than the amount of the Tariff payable for such power output as per relevant Law applicable at the time.
- 30.6. The Parties shall comply with the provisions of the applicable Law including, in particular, Grid Code as amended from time to time regarding operation and maintenance of the Project and all matters incidental thereto.

## **DISPATCH**

### **31. DISPATCH**

- 31.1. The Unit(s)/ Project shall be required to maintain compliance to the applicable Grid Code requirements and directions, if any, as specified by concerned SLDC/ RLDC from time to time.

## **METERING AND BILLING**

### **32. METERING**

- 32.1. Metering and grid connectivity, (if required), of Project would be the responsibility of the SPD in accordance with the prevailing guidelines of the concerned DISCOM and / or CEA and Policy for Decentralized Renewable Energy System, Madhya Pradesh/ MPERC (Grid Interactive Renewable Energy Systems Related Matters) Regulations[Revision-II], 2024. {RG-39(II) of 2024 and their amendments/ substitutions. Nodal Agency/ Procurer could facilitate in the process; however, the entire responsibility towards such arrangements lies with SPD only.
- 32.2. The SPD shall install the Generation Meter(s) separately near the output of Inverter(s) and Net-Meter shall be located in place of present DISCOM's metering system for each Premise. Basis technical feasibility, generation Meter(s) would suitably be aligned with billing system of concerned DISCOM, where generation from respective Unit(s) would be recorded.
- 32.3. Nodal Agency would evolve and maintain a "single window accounting, invoicing and settlement system (SWAISS)" which would integrate generation data of concerned Unit(s). The SWAISS would act as interface between SPD and Procurer for single window metering, billing, tariff payment and payment reconciliation.
- 32.4. The accuracy class, current rating and certifications of the net meter and generation meter shall confirm with the standards for net meter and standards for generation meter as provided under the concerned Regulations/ Rules/ Policy including Madhya Pradesh Policy for Decentralized Renewable Energy System, 2016 and any subsequent amendment.
- 32.5. The Metering System shall have such inbuilt provisions that it senses grid availability and when grid is not available it should Isolate the Project;
- 32.6. Till SWAISS becomes operational, the Generation Meter will be read by the SPD's personnel on the Metering Date on monthly basis. The authorized representative of the Procurer can be present at the time of meter reading. Both the Parties shall sign a joint meter reading report. However, in case the joint meter reading report is not signed in the first three (3) Business Days of Metering Date of any month due to non-availability of the Procurer's authorized representative, the report signed by the SPD shall be considered as joint meter reading report, the Parties agree that such joint meter reading report shall be final and binding on the Parties.
- 32.7. Meters and metering equipment shall be tested as per provision of MPERC and as per IS 14697 at CPRI or at any NABL accredited lab before installation at site on the cost of SPD and should be properly sealed in the presence of designated authority from Nodal

Agency at the time of installation.

- 32.8. The Metering System at the Delivery Point(s) and any additional meters required by Applicable Law shall be tested, maintained and owned by the SPD.
- 32.9. The Procurer, at its own discretion, may install a check meter, at its cost, to verify the measurements of the Metering System.
- 32.10. The risk and title to the solar power supplied by the SPD shall pass to the Procurer at the Delivery Point(s).
- 32.11. The energy metering of Project, in kWh separately, shall be on monthly basis equal to gross energy generated for a net metered Project.
- 32.12. As provided in SCHEDULE 7 of the PPA, Unit(s) under the Project may have net metering and/ or group net metering (GNM) arrangements simultaneously in accordance with Madhya Pradesh/ MPERC (Grid Interactive Renewable Energy Systems Related Matters) Regulations[Revision-II], 2024. {RG-39(II) of 2024 and their amendments/ substitutions. SPD would make and maintain necessary arrangements accordingly as applicable and relevant.

### **33. BILLING**

- 33.1. The energy billable to Procurer, by SPD, shall be computed on monthly basis by multiplying the Tariff applicable in that Month of the Contract Year as per SCHEDULE 3: TARIFF SCHEDULE with the gross energy generated from the Project. It would be supported by SWAISS, where SPD would have option to raise aggregate bill for the Project.
- 33.2. Import and export of energy from Project operating on net metered and/ or Group Net Metering and/or gross metered basis shall be settled as per MPERC (Grid Interactive Renewable Energy Systems Related Matters) Regulations[Revision-II], 2024. {RG-39(II) of 2024 / Policy for Decentralized Renewable Energy System, Madhya Pradesh, 2016 and their amendments/ substitutions. This would determine the relationship between the DISCOM and the Procurer, but not the SPD and the Procurer.
- 33.3. For ease of doing business (EoDB), a SWAISS portal has been developed by MP Urja Vikas Nigam Limited (MPUVNL). The SWAISS would have access by Nodal Agency, SPD and Procurer.
  - a. The SWAISS would have a data base consisting of two modules that would capture details of buildings and RESCOs:
    - Building module: It would consist of physical (location, district, DDO, area etc.) and electrical attributes (IVRS, solar system size, metering details etc.) of each building.
    - Vendor module: It would contain details of district-wise successful RESCOs, including their contact coordinates.
  - b. Functional aspects of SWAISS
    - Import of solar generation data: As per RfP and PPA conditions, every unique solar system (mapped to a consumer IVRS) would have a generation meter. Generation meter would be sealed by concerned Discom for security and authenticity.
    - Solar generation recorded in generation meter of Unit(s) would be fetched to SWAISS through technically feasible solutions that aligns best with prevalent billing system of concerned Discoms.
    - The SWAISS would do DDO wise calculation of bills as per background

mapping of unique solar systems and respective tariff.

## **TARIFF AND PAYMENT**

### **34. CONSIDERATION**

- 34.1. Procurer shall pay to the SPD monthly payment towards energy consumed from the Unit(s)/ Project as per the Metering and Billing as described in Articles 32 and 33 above for each Month during the period from the Unit COD of each Unit to Expiry Date at a Tariff corresponding to the concerned Contract Year.
- 34.2. The Tariff as determined pursuant to RFP by the Nodal Agency would be as per SCHEDULE 3: TARIFF SCHEDULE, from Unit COD till the Expiry Period.

### **35. INVOICE**

- 35.1. The SPD shall invoice Procurer on or before third Business Day of each Month ("Metering Date") in respect of energy generated the immediately preceding month. However, the last monthly invoice pursuant to this PPA shall include energy generated only till the Expiration Date of this PPA.
- 35.2. To generate invoice, SPD would login to SWAISS and select concerned District [ ] and Procurer. SWAISS would fetch consumption and billing data on pre-designed format for concerned SPD. After preview of invoice, SPD would be routed to trigger invoice through message and e-mail to respective Procurer.
- 35.3. The Invoice to the Procurer shall include:
  - i. Gross energy generated
  - ii. Supporting data, documents and calculations in accordance with this PPA;

### **36. DUE DATE**

- 36.1. If there is no dispute on an Invoice, Procurer shall pay all amounts due under the Invoice within fifteen (15) Business Days after the date of the receipt of the invoice in Procurer's office ("Due Date") through e-mail or/ and FAX.

### **37. METHOD OF PAYMENT**

- 37.1. The Procurer would have dedicated head for payment towards this PPA.
- 37.2. The Procurer would have login rights at SWAISS to see respective invoice(s). Subsequently, Procurer would initiate and make payment to SPD through dedicated head.
- 37.3. Procurer would provide a payment response to Nodal Agency through online portal to SWAISS, which would be verified by Nodal Agency and update the payment status on SWAISS for perusal and settlement by concerned SPD.

### **38. LATE PAYMENT**

- 38.1. Save for provisions in for disputed Bills, in case payment against any Invoice is delayed by the Procurer beyond its Due Date, a Late Payment Surcharge shall be payable by Procurer to the SPD at the rate of 1.5% per Month ("Late Payment Surcharge") calculated on the amount of outstanding payment, calculated on a Day to Day basis for each Day of the delay beyond the Due Date, compounded on monthly basis. Late Payment Surcharge shall be claimed by the SPD through its subsequent Invoice.

### **39. REBATE**

- 39.1. Save for any dispute, Procurer shall be eligible for rebate of 1% per Month on the amount of outstanding payment, for payment of any Bill within first seven (7) Business Days from the Metering Date, calculated on a Day to Day basis for each Day of the month.
- 39.2. In case of any disputed bill, the rebate shall be allowed on only that payment which is made within first seven (7) days of Metering Date, irrespective of the outcome of final settlement of the dispute.
- 39.3. No Rebate shall be payable on the Bills raised on account of Change in Law relating to taxes, duties and cess etc.

### **40. DISPUTED BILL**

- 40.1. If the Procurer does not dispute a Monthly Bill or a Supplementary Bill raised by SPD within ten (10) Days from the receipt of Monthly Bill, such Bill shall be taken as conclusive.
- 40.2. If the Procurer disputes the amount payable under a Monthly Bill or a Supplementary Bill, as the case may be, it shall within ten (10) Days of receipt of such Bill, issue a notice (the "Bill Dispute Notice") to the SPD setting out:
- i. the details of the disputed amount;
  - ii. its estimate of what the correct amount should be; and
  - iii. all written material in support of its claim.
- 40.3. If the SPD agrees to the claim raised in the Bill Dispute Notice issued pursuant to Article 40.2, the SPD shall revise such Bill and present along with the next Monthly Bill.
- 40.4. If the SPD does not agree to the claim raised in the Bill Dispute Notice issued pursuant to Article 40.2, it shall, within seven (7) Days of receiving the Bill Dispute Notice, furnish a reply to Bill Dispute Notice to the Procurer providing:
- i. its reasons against dispute;
  - ii. its estimate of what the correct amount should be; and
  - iii. all written material in support of its counter-claim.
- 40.5. Upon receipt of the reply to Bill Dispute Notice from SPD, by Procurer, under Article 40.4, authorized representative(s) or a director of the board of directors/ member of board of the Procurer and SPD shall meet and make best endeavours to amicably resolve such dispute within seven (7) Days of receipt of the reply to the Bill Dispute Notice.

- 40.6. If the Parties do not amicably resolve the Dispute within seven (7) Days of receipt of reply to the Bill Dispute Notice pursuant to Article 40.4, the matter shall be referred to Dispute resolution in accordance with Article 72 to 74.
- 40.7. For the avoidance of doubt, it is clarified that despite a Dispute regarding an Invoice, Procurer shall, without prejudice to its right to Dispute, be under an obligation to make payment of 100% of the undisputed amount of the concerned Monthly Bill, and 90% of disputed amount under protest within fifteen (15) Business Days after the date of the receipt of the invoice. Once the dispute is settled, the correction amount shall be adjusted with the monthly interest rate of 1.50% computed on daily basis, implying that if the Procurer has paid in excess, SPD would have to pay the monthly interest rate for the excess amount, and if the Procurer has paid less, the Procurer would have to pay the monthly interest rate on the remainder amount.

#### **41. PAYMENT SECURITY MECHANISM**

- 41.1. Nodal Agency shall provide to the SPD, in respect of payment of its Monthly Bills and/or Supplementary Bills, payment security in the form of a revolving fund established through State budget.
- 41.2. If there is no dispute on an Invoice and there is delay or default in payment by Procurer for more than thirty (30) day of Due Date, Nodal Agency would ensure such payment to SPD through revolving fund.

#### **42. QUARTERLY AND ANNUAL RECONCILIATION**

- 42.1. The Parties acknowledge that all payments made against Monthly Bills and Supplementary Bills shall be subject to quarterly reconciliation within thirty (30) Days of the end of the quarter of each Contract Year and annual reconciliation at the end of each Contract Year within thirty (30) Days of the end of the Contract Year to take into account the Energy Accounts, payment adjustments, Tariff rebate, Late Payment Surcharge, or any other reasonable circumstance provided under this PPA.
- 42.2. The Parties, therefore, agree that as soon as all such data in respect of any quarter of an Contract Year or a full Contract Year, as the case may be, has been finally verified and adjusted, the SPD and Procurer shall jointly sign such reconciliation statement. Within fifteen (15) Days of signing of a reconciliation statement, the SPD shall make appropriate adjustments in the next Monthly Bill. Late Payment Surcharge/ interest shall be payable in such a case from the date on which such payment had been made to the SPD or the date on which any payment was originally due, as may be applicable. Any Dispute with regard to the above reconciliation shall be dealt with in accordance with the provisions of Article 40.

#### **43. PAYMENT OF SUPPLEMENTARY BILL**

- 43.1. Procurer/ SPD may raise a ("Supplementary Bill") for payment on account of:
- i. Adjustments required by the Energy Accounts (if applicable); or
  - ii. Change in Law as provided in 51.1(iv);
- 43.2. Procurer shall remit all amounts due under a Supplementary Bill raised by the SPD to the SPD's Designated Account by Due Date. Similarly, the SPD shall pay all amounts

due under a Supplementary Bill raised by Procurer by the Due Date to Procurer's designated bank account and notify such Procurer of such payment on the same Day.

- 43.3. In the event of delay in payment of a Supplementary Bill by the SPD beyond its Due Date or by Procurer beyond the 30th Day from the Due Date, as the case may be, a Late Payment Surcharge shall be payable at the same terms applicable to the Monthly Bill in Article 38.

## **INSURANCES**

### **44. INSURANCE**

- 44.1. The SPD shall maintain at its own costs, throughout the Term of PPA and any extensions thereof all mandatory insurance coverage for adequate amount including but not restricted to, theft, damages, comprehensive general liability insurance covering the Project and accidental losses, bodily harm, injury, death of all individuals employed/assigned by the SPD to perform the services required under this PPA.

### **45. APPLICATION OF INSURANCE PROCEEDS**

- 45.1. Save as expressly provided in this PPA or respective Insurances, the proceeds of any insurance claim made due to loss or damage to the Project or any part of the Project shall be first applied to reinstatement, replacement or renewal or making good of such loss or damage of the Project.
- 45.2. If a Force Majeure Event renders the Project no longer economically and technically viable and the insurers under the respective Insurances make payment on a "total loss" or equivalent basis, Procurer shall have no claim on such proceeds of such Insurance.

### **46. EFFECT ON LIABILITY OF PROCURER**

- 46.1. Notwithstanding any liability or obligation that may arise under this PPA, any loss, damage, liability, payment, obligation or expense which is insured or not or for which the SPD can claim compensation, under any Insurance shall not be charged to or payable by Procurer.

## **FORCE MAJEURE**

### **47. DEFINITIONS**

- 47.1. In this Article, the following terms shall have the following meanings:

#### *Affected Party*

- 47.2. An affected Party means Procurer or the SPD whose performance has been affected by an event of Force Majeure.
- 47.3. An event of Force Majeure affecting the DISCOM, which has affected the interconnection facilities, shall be deemed to be an event of Force Majeure affecting the SPD.
- 47.4. Any event of Force Majeure affecting the performance of the SPD's contractors, shall be deemed to be an event of Force Majeure affecting SPD only if the Force Majeure event is affecting and resulting in:

- i. late delivery of plant, machinery, equipment, materials, spare parts, fuel, water or



consumables for the Project; or

- ii. a delay in the performance of any of the SPD's contractors for other works associated with Project.

*Force Majeure*

47.5. A 'Force Majeure' means any event or circumstance or combination of events those stated below that wholly or partly prevents or unavoidably delays an Affected Party in the performance of its obligations under this PPA, but only if and to the extent that such events or circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided if the Affected Party had taken reasonable care:

- i. Act of God, including, but not limited to lightning, drought, fire and explosion (to the extent originating from a source external to the site), earthquake, volcanic eruption, landslide, flood, cyclone, typhoon or tornado, epidemic, pandemic or exceptionally adverse weather conditions which are in excess of historical statistical measures, act of war, terrorist attack, public disorders, civil disturbances, riots, insurrection, sabotage, rebellion, blockade, embargo ;
- ii. A Force Majeure Event shall not be based on the Economic hardship of either Party. In case of any damage because of force majeure event, the Project shall be repaired / commissioned at its own cost by the SPD.
- iii. the unlawful, unreasonable or discriminatory revocation of, or refusal to renew, any Consent required by the SPD or any of the SPD's contractors to perform their obligations under the Project documents or any unlawful, unreasonable or discriminatory refusal to grant any other consent required for the development/ operation of the Project. Provided that an appropriate court of law declares the revocation or refusal to be unlawful, unreasonable and discriminatory and strikes the same down.
- iv. radioactive contamination or ionising radiation originating from a source in India or resulting from another Force Majeure Event mentioned above excluding circumstances where the source or cause of contamination or radiation is brought or has been brought into or near the Project by the Affected Party or those employed or engaged by the Affected Party.
- v. Industry wide strikes and labour disturbances having a nationwide impact in India.
- vi. Nation/state-wide strike, lockout, boycotts or other industrial disputes which are not directly and solely attributable to the actions of the Affected Party, but does not include strike or labour unrest limited to the Affected Party or the SPD Related Parties;

**48. FORCE MAJEURE EXCLUSIONS**

48.1. Force Majeure shall not include (i) any event or circumstance which is within the reasonable control of the Parties and (ii) the following conditions, except to the extent that they are consequences of an event of Force Majeure:

- i. Inability to obtain permission from DISCOM (for Category I Project) Page 41

- ii. Inability to obtain commissioning certificate from Nodal Agency
- iii. Unavailability, late delivery, or changes in cost of the plant, machinery, equipment, materials, spare parts, fuel or consumables for the Project;
- iv. Delay in the performance of any contractor, sub-contractor or their agents excluding the conditions as mentioned in Article 47.5;
- v. Non-performance resulting from normal wear and tear typically experienced in power generation materials and equipment;
- vi. Strikes at the facilities of the Affected Party;
- vii. Insufficiency of finances or funds or the PPA becoming onerous to perform; and
- viii. Non-performance caused by, or connected with, the Affected Party's:
  - a. Negligent or intentional acts, errors or omissions;
  - b. Failure to comply with an Indian Law; or iii. Breach of, or default under this PPA.

#### **49. NOTIFICATION OF FORCE MAJEURE EVENT**

- 49.1. The Affected Party shall give notice to the other Party of any event of Force Majeure as soon as reasonably practicable, but not later than three (3) Days after the date on which such Party knew or should reasonably have known of the commencement of the event of Force Majeure. If an event of Force Majeure results in a breakdown of communications rendering it unreasonable to give notice within the applicable time limit specified herein, then the Party claiming Force Majeure shall give such notice as soon as reasonably practicable after reinstatement of communications, but not later than one (1) Day after such reinstatement.
- 49.2. Provided that such notice of Force Majeure shall be a pre-condition to the Affected Party's entitlement to claim relief under this PPA. Such notice shall include full particulars of the event of Force Majeure, its effects on the Party claiming relief and the remedial measures proposed. The Affected Party shall give the other Party regular (weekly or monthly basis, as communicated and agreed upon between the Parties in writing) reports on the existence Force Majeure and/ or progress of those remedial measures and such information as the other Party may reasonably request about the Force Majeure Event.
- 49.3. The Affected Party shall give notice to the other Party of (i) the cessation of the relevant event of Force Majeure; and (ii) the cessation of the effects of such event of Force Majeure on the performance of its rights or obligations under this PPA, as soon as practicable, but not later than seven (7) Days after becoming aware of each of these cessations.
- 49.4. In case of delay in Payment due to Force Majeure, Affected Party shall have inform the other Party and make payment as soon as effect of Force Majeure shall be ended on Affected Party payment obligation.

#### **50. DUTY TO PERFORM AND DUTY TO MITIGATE**

- 50.1. To the extent not prevented by a Force Majeure Event pursuant to Articles 47 and 49,

the Affected Party shall continue to perform its obligations pursuant to this PPA. The Affected Party shall use its reasonable efforts to mitigate the effect of any Force Majeure Event as soon as practicable.

## **51. AVAILABLE RELIEF FOR A FORCE MAJEURE EVENT**

### **51.1. Subject to this Article 51**

- i. no Party shall be in breach of its obligations pursuant to this PPA except to the extent that the performance of its obligations was prevented, hindered or delayed due to a Force Majeure Event;
- ii. every Party shall be entitled to claim relief in relation to a Force Majeure Event in regard to its obligations, including but not limited to those specified under Article 26;
- iii. For avoidance of doubt, none of either Party's obligation to make payments of money due and payable prior to occurrence of Force Majeure events under this PPA shall be suspended or excused due to the occurrence of a Force Majeure Event in respect of such Party.
- iv. Provided that no payments shall be made by either Party affected by a Force Majeure Event for the period of such event on account of its inability to perform its obligations due to such Force Majeure Event.

## **CHANGE IN LAW**

## **52. DEFINITIONS**

In this Article, the following terms shall have the following meanings:

- 52.1. "Change in Law" means the occurrence of any of the following events after the Bid Submission Date resulting into any additional recurring/ non-recurring expenditure by the SPD or any income to the SPD:
- i. the enactment, coming into effect, adoption, promulgation, amendment, modification or repeal (without re-enactment or consolidation) in India, of any Law, including rules and regulations framed pursuant to such Law;
  - ii. change in the interpretation or application of any Law by any Indian Governmental Instrumentality having the legal power to interpret or apply such Law, or any Competent Court of Law;
  - iii. the imposition of a requirement for obtaining any Consents, Clearances and Permits which was not required earlier;
  - iv. change in any Consents, approvals or licenses available or obtained for the Project, otherwise than for default of the SPD, which results in any change in any cost of or revenue from the business of selling electricity by the SPD to Procurer under the terms of this PPA;
  - v. a change in the terms and conditions prescribed for obtaining any Consents or the inclusion of any new terms or conditions for obtaining such Consents, except due

to any default of the SPD;

- vi. change in the Rules, Regulations, Orders or any document issued or released by the CERC/ CEA/ MPERC/ MPPMCL/ MP DISCOMs or any other Government Authority;
- vii. any change in taxes, duties and cess or introduction of any taxes, duties and cess made applicable for generation and sale/ supply of power by SPD as per the terms of this PPA but shall not include: (i) any change in any withholding tax on income or dividends distributed to the shareholders of the SPD, or (ii) change in the rates of existing taxes applicable to the SPD or (iv) change in income taxes applicable for the SPD

### **53. NOTIFICATION OF CHANGE IN LAW**

- 53.1. If the SPD is affected by a Change in Law in accordance with Article 1.52 and wishes to invoke a Change in Law provision, it shall give notice to Procurer of such Change in Law as soon as reasonably practicable after becoming aware of the same or should

reasonably have known of the Change in Law but not later by thirty (30) Days from the date of such the notification regarding Change in Law.

- 53.2. Notwithstanding Article 53.1, the SPD shall be obliged to serve a notice to Procurer if it is beneficially affected by a Change in Law. Without prejudice to the factor of materiality or other provisions contained in this PPA, the obligation to inform Procurer contained herein shall be material. However, in case the SPD has not provided such notice, Procurer shall have the right to issue such notice to the SPD.

- 53.3. Any notice served pursuant to Change in Law shall provide, amongst other things, precise details of:

- i. the Change in Law; and
- ii. the effects on the SPD of the matters relevant for Construction Period and the operation period for the Project.

### **54. RELIEF FOR CHANGE IN LAW**

- 54.1. The aggrieved Party shall be required to approach the Nodal Agency for seeking appropriate relief under Change in Law.
- 54.2. The decision of the Nodal Agency to acknowledge a Change in Law and the date from which it will become effective and relief provided for the same shall be final and binding on both the Parties. Principle that the purpose of compensating the Party affected by such Change in Law, is to restore through Monthly Bill payment, to the extent contemplated in this Article 54, the affected Party to the same economic position as if such Change in Law has not occurred.

<b>Impact</b>	<b>Variation due to change in existing taxes/ duties or enactment of new law/</b>	<b>Proportionate adjustments to the tariff</b>	<b>Effective Timelines</b>
<b>Impact on Capital Cost</b> <b>(Adjustments will be considered only if the overall impact due to all Change in Law events would be more than the 2.5% of Normative Capital Cost {threshold})</b>	$\pm X\%$	$\pm 0.8 X\%$	If the relevant changes are notified after Bid Deadline as per RFP and, (3) Months prior to the COD of the Project.
<b>Impact on Operational Cost</b> <b>(Adjustments will be made only if the overall impact due to all Change in Law events would be more than 10% of</b>	$\pm Y\%$	$\pm 0.1 Y\%$	If the relevant change is notified after Bid Deadline as mentioned in RFP, adjustments in tariff shall be provided till the time such change is in force
<b>ILLUSTRATION</b>  i. Say, there is a Change in Law event, which increase the duty on Inverter by 10%. Due to this event, the Capital Cost would increase by $9\% \times 10\% = 0.9\%$ . Since it did not cross the threshold of 2.5%, no adjustment shall be provided. ii. Say, there are multiple Change in Law events which increase the duty on Solar Module by 10% and on inverter by 10%. Due to this, the Capital Cost would increase by $56.4\% \times 10\% + 9\% \times 10\% = 6.54\%$ . Proportionate adjustment in the tariff as per the formula given in the table shall be $0.8 \times 6.54\% = 5.232\%$ . The revised tariff in this case shall be $\text{Tariff} \times (1+5\%)$ .			

- 54.3. In order to pass on the impact of Change in Law in the tariff quoted by the SPD, Nodal Agency shall consider the following distribution percentages of the Normative Capital Cost of the Project:

- i. Solar Module – 56.4%

- a. Solar Cell – 60% of the Solar Module Cost
- ii. Inverter – 9%
- iii. BOS – 18.4%
- iv. Installation & Commissioning – 16.2%

The O&M cost shall be considered as 2.55% of the normative capital cost of the project. The Tariff would be adjusted as below based on the variations in the SPD's capital cost and operational cost on account of impact due to Change in Law event. Moreover, the adjustment shall be allowed only on the variation in Normative Capital Cost beyond the threshold specified in table above. Moreover, while calculating the impact, except for Solar Module and Solar Inverter, other components shall be considered to be procured locally (from India).

- 54.4. In a case where the impact due to Change in Law is not directly affecting the capital or operational cost of the project:
  - i. Any additional charges for consuming the power from the Solar Power Plant or ejection into the grid, shall be directly borne by the Power Procurer.
- 54.5. In case of change in Normative Capital Cost due to Impact of Change in Law, revised Tariff shall be communicated by the Nodal Agency to the Procurer and the SPD within thirty (30) Days from the COD of the Project.
- 54.6. In case of change in Operational Cost due to Impact of Change in Law, revised Tariff shall be communicated by the Nodal Agency to the Procurer and the SPD within thirty (30) Days from the date of receipt of request from the Procurer or the SPD.
- 54.7. SPD shall be liable to bear the impact of Change in Law in case the impact on Normative Capital Cost due to such Change in Law coming into force or applicable after the SCSD. It is to clarify that, above statement is not considering the impact of Change in Law on Operational Cost.

## EVENTS OF DEFAULT AND TERMINATION

### 55. SOLAR POWER DEVELOPER'S EVENT OF DEFAULT

55.1. The occurrence and continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by Procurer of its obligations under this PPA, shall constitute a SPD's Event of Default:

- i. the failure to achieve Commissioning of the PPA Capacity, within the definite time period i.e., SCSD, as defined under RFP and PPA, or any extension granted by Nodal Agency and/or Procurer;
- ii. if
  - a. the SPD assigns, mortgages or charges or purports to assign, mortgage or charge any of its assets or rights related to the Project in contravention of the provisions of this PPA; or
  - b. the SPD transfers or novates any of its rights and/ or obligations under this PPA, in a manner contrary to the provisions of this PPA; except where such transfer.
    - i. is in pursuance of a Law; and does not affect the ability of the transferee to perform, and such transferee has the financial capability to perform, its obligations under this PPA or
    - ii. is to a transferee who assumes such obligations under this PPA and the PPA remains effective with respect to the transferee; or
- iii. If
  - a. the SPD becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) Days, or
  - b. any winding up or bankruptcy or insolvency order is passed against the SPD, or
  - c. the SPD goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law; or
  - d. Provided that a dissolution or liquidation of the SPD will not be a SPD Event of Default if such dissolution or liquidation is for the purpose of a merger, consolidation or reorganization and where the resulting company retains creditworthiness similar or more than the SPD and expressly assumes all obligations of the SPD under this PPA and is in a position to perform them; or
  - e. the SPD fails to make any payment (i) of an amount exceeding Rupees two (2) Lakh required to be made to Procurer under this PPA, within three (3) Months after the Due Date of an undisputed invoice /demand raised by

Procurer on the SPD; or

- f. any of the representations and warranties made by the SPD in PPA being found to be untrue or inaccurate. Further, in addition to the above, any of representations made or the undertakings submitted by the SPD at the time of submission of the Bid being found to be breached or inaccurate, including but not limited to undertakings from its parent company/ affiliates related to the minimum equity obligation; Provided however, prior to considering any event specified under this sub-Article to be an Event of Default, Procurer shall give a notice to the SPD in writing of at least thirty (30) Days; or
- g. the SPD repudiates this PPA and does not rectify such breach within a period of thirty (30) Days from a notice from Procurer in this regard; or
- h. except where due to Procurer's failure to comply with its material obligations, the SPD is in breach of any of its material obligations pursuant to this PPA, and such material breach is not rectified by the SPD within thirty (30) Days of receipt of first notice in this regard given by Procurer.
- i. the SPD fails to complete/ fulfill the activities/conditions specified in Article 12, beyond a period of twenty (20) Weeks from the SCSD; or
- j. The SPD fails to maintain the PBG in accordance with PPA and RFP; or
- k. change in controlling shareholding before the specified time frame as mentioned in Article 14.1 of this PPA; or
- l. occurrence of any other event which is not specified in this PPA to be a material breach/ default of the SPD;
- m. SPD generates solar power lower than MSO on a monthly basis continuously for nine (9) Months.

## **56. PROCURER'S EVENT OF DEFAULT**

56.1. The occurrence and the continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by the SPD of its obligations under this PPA, shall constitute the Event of Default on the part of defaulting Procurer:

- i. Procurer fails to pay (with respect to a Monthly Bill or a Supplementary Bill), as per Article 43, for a period of ninety (90) Days after the Due Date and the SPD is unable to recover the amount outstanding to the SPD through the Payment Security Mechanism; or
- ii. Procurer repudiates this PPA and does not rectify such breach even within a period of thirty (30) Days from a notice from the SPD in this regard; or
- iii. except where due to the SPD's failure to comply with its obligations under PPA



and RFP, Procurer is in material breach of any of its obligations pursuant to this PPA and RFP, and such material breach is not rectified by Procurer within thirty (30) Days of receipt of notice in this regard from the SPD; or

- v. If
  - a. Procurer becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) Days, or
  - b. any winding up or bankruptcy or insolvency order is passed against Procurer, or
  - c. Procurer goes into liquidation or dissolution or a receiver or any similar officer is appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law,
  - d. Procurer vacates the premises of the Project
- vi. Provided that it shall not constitute a Procurer Event of Default, where such dissolution or liquidation of Procurer or Procurer is for the purpose of a merger, consolidation or reorganization or the Procurer vacating the premises to a new entity and where the resulting entity has the financial standing to perform its obligations under this PPA and has creditworthiness similar or more than the Procurer and expressly assumes all obligations of Procurer and is in a position to perform them; or;
- vii. occurrence of any other event which is not specified in this PPA but leading to a material breach or default by Procurer.

## **57. PROCEDURE FOR CASES OF SOLAR POWER DEVELOPER EVENT OF DEFAULT**

- 57.1. Upon the occurrence and continuation of any SPD Event of Default under Article 55, Procurer shall have the right to deliver to the SPD, with a copy to the Lenders of the SPD with whom the SPD has executed the Financing agreement, with a copy to the Nodal Agency, a notice stating its intention to terminate this PPA ("Procurer Preliminary Default Notice"), which shall specify in reasonable detail, the circumstances giving rise to the issue of such notice.
- 57.2. Following the issue of a Procurer Preliminary Default Notice, the Consultation Period of sixty (60) Days or such longer period as the Parties may agree, shall apply and it shall be the responsibility of the Parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant Event of Default having regard to all the circumstances.
- 57.3. During the Consultation Period, the Parties shall continue to perform their respective obligations under this PPA & RFP.
- 57.4. Within a period of seven (7) Days following the expiry of the Consultation Period unless the Parties shall have otherwise agreed to the contrary or the SPD Event of Default

giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, the Lenders shall have the right to seek the substitution of the SPD by a Selectee for the residual period of this PPA for the purpose of performing obligations of the SPD. Such substitution of the SPD by a Selectee shall be as per the procedure prescribed in this PPA and with prior approval of Procurer, provided Selectee as aforesaid shall have the required qualification and experience as prescribed under the RFP.

57.5. In the event the Lender's total debt obligations have been completely satisfied at the time of issue of Procurer's Preliminary Default Notice or more than fifteen (15) days have expired beyond the period prescribed for the Lender's right to substitute as per Article 57.4, and upon the continuation of SPD Default and the failure by the SPD to rectify such default within the applicable Consultation Period specified in this Article 57 Procurer could exercise any one of the following options:

i. Procurer can own the Project by paying the Termination Payment as per below formula:

After COD, Termination Payment = Net Asset Value X 50%

Net Asset Value = Normative Project Cost X(1 – (4%X No. of Contract Years))

The handover of full assets shall be without any encumbrance/liability along with warranties and insurances in force.

In such case the termination payment shall be deposited in the designated bank account.

Note: "No. of Contract Years" shall mean the total number of years for which Project is operational from the COD. In case, Termination occurs after eight (8) Years seven (7) Months of operation, No. of Contract Years would be eight (8).

ii. In situations where the Procurer does not exercise above option-I, in such case the SPD shall take the Project from the premises of the Procurer and make the roof/premise in the original condition as existing before the start of this Project. This has to be undertaken at SPDs cost without any liability to Procurer.

57.6. There will be no Termination Payment to SPD if the termination happens because of the reasons mentioned below:

i. Termination before the Project COD or;

ii. event of default occurs due to cause mentioned in Article 55.1;

iii. The SPD is obligated to perform all duties mentioned in PPA and pay the Termination Payment, in case of SPD Event of Default, on or before the last Day of Procurer Termination Notice.

## **58. PROCEDURE FOR CASES OF PROCURER EVENT OF DEFAULT**

58.1. Upon the occurrence and continuation of any Procurer Event of Default specified in Article 56 the SPD shall have the right to deliver to Procurer, a SPD Preliminary Default Notice, which notice shall specify in reasonable detail the circumstances giving rise to its issue.

- 58.2. Following the issue of a SPD Preliminary Default Notice, the Consultation Period of sixty (60) Days or such longer period as the Parties may agree, shall apply and it shall be the responsibility of the Parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant Event of Default having regard to all the circumstances.
- 58.3. During the Consultation Period, the Parties shall continue to perform their respective obligations under this PPA.
- 58.4. After a period of seven (7) Days following the expiry of the Consultation Period and unless the Parties shall have otherwise agreed to the contrary or Procurer Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied. The SPD shall:

- i. Get the termination payment from the Procurer and handover the Project to it by serving a fifteen (15) Days' notice to the Procurer ("SPD Termination Notice"). Termination payment would to be calculated as per below formula:

Termination payment = Net Asset Value

*For first fifteen (15) Contract Years;*

Net Asset Value = Normative Project Cost X  $(1 - (3\% \times \text{No. of Contract Years}))$

*For remaining period of ten (10) Contract Years;*

Net Asset Value = Normative Project Cost X  $[(1 - (3\% \times 15 \text{ Contract Years}) - (5.5\% \times \text{No. of Contract Years exceeding 15 years}))]$

In such case the termination payment shall be deposited in the designated bank account.

OR

- ii. In case the SPD does not exercise above option-I, it can take the Project from the premises of the Procurer and get the termination payment as below:-

Termination payment= 10% of Net Assets Value

*For first fifteen (15) Contract Years;*

Net Asset Value = Normative Project Cost X  $(1 - (3\% \times \text{No. of Contract Years}))$

*For remaining period of ten (10) Contract Years;*

Net Asset Value = Normative Project Cost X  $[(1 - (3\% \times 15 \text{ Contract Years}) - (5.5\% \times \text{No. of Contract Years exceeding 15 years}))]$

SPD shall make the roof in original condition existing as before the start of this Project. This has to be undertaken at SPDs cost without any liability to Procurer.

- 58.5. Procurer obligated to perform all duties mentioned in PPA and pay the termination fees, in case of Procurer Event of Default, on or before the last Day of SPD's

Termination Notice.

**59. TERMINATION DUE TO FORCE MAJEURE**

If the Force Majeure Event or its effects continue to be present beyond the period as specified in Article 26.3, either Party shall have the right to cause termination of the PPA. In such an event, this PPA shall terminate on the date of Termination Notice and no Termination Payment shall be paid by any of the Party.

**60. TERMINATION ON REQUEST OF THE PROCURER**

60.1. Procurer may, on giving at least six (6) Months written notice to the SPD with a copy marked to the Lenders, terminate the PPA prior to the Effective Date or after the completion of first five (5) Contract Years. Following the issue of a "Default Notice", a Conciliation Period of sixty (60) Days or such longer period as the parties may agree, shall apply and it shall be the responsibility of the parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant SPD / Procurer Event of Default having regard to all the circumstances.

60.2. However, after the expiry of the default notice if both parties can't reach to an amicable solution, in such case the Procurer shall pay to SPD a sum as per formula given hereunder:

*Termination payment = Net Asset Value*

*For first fifteen (15) Contract Years*

*Net Asset Value = Normative Project Cost X (1- (3% X No. of Contract Years)); For the remaining period of ten (10) Contract Years*

*Net Asset Value = Normative Project Cost X [(1 – (3.5% X 15 Contract Years) – (4.75% X No. of Contract Years exceeding 15 Contract Years)]*

In such case, termination payment shall be deposited in the designated bank account.

The Parties shall promptly execute all documents necessary to cause title to the Project to pass to Procurer on the date of termination free and clear of all liens and assign all vendor warranties for the Project to the Procurer. Upon execution of the documents and payment of the applicable purchase price in each case as described in the preceding sentence, the agreement shall stand terminated and the Procurer shall become the owner of the Project. The transfer of Project will be without any encumbrances, no assignments.

Upon such termination, the SPD may offer its Comprehensive Operations and Maintenance services to the Procurer and the Parties may enter into an O&M agreement in this regard. The terms and conditions of the O&M agreement will be negotiated in good faith between the Parties.

60.3. Notwithstanding Terminations, both SPD and Procurer shall ensure full and final settlement of respective rights and obligations pursuant to terms and conditions of this RFP and Agreement/ PPA, so that neither would have to carry and bear the burden of the other's rights and obligations. Towards fulfillment of this provision, an affidavit on a

non-judicial stamp paper shall have to be furnished by both SPD and Procurer to each other at the time of termination.

## **LIABILITY AND INDEMNIFICATION**

### **61. INDEMNITY**

61.1. The SPD shall indemnify, defend and hold Procurer harmless against:

- i. any third party claims against Procurer for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by the SPD of any of its obligations under this PPA; and
- ii. any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest actually suffered or incurred by Procurer from third party claims arising by reason of a breach by the SPD of any of its obligations under this PPA or any of the representations or warranties of the SPD under this PPA being found to be inaccurate or untrue.
- iii. Notwithstanding any liability or obligation that may arise under this PPA, any loss, damage, liability, payment, obligation or expense which is insured or not or for which the Procurer can claim compensation under any insurance policy, shall not be charged to or payable by the SPD.
- iv. However, this Article 61 shall not apply to such breaches by the SPD, for which specific remedies have been provided for under this PPA

### **62. PROCEDURE FOR CLAIMING INDEMNITY**

62.1. Third party claims

- i. Where the indemnified Party is entitled to indemnification from the indemnifying Party pursuant to Article 61.1(i), the indemnified Party shall promptly notify the indemnifying Party of such claim referred to in to Article 61.1(i) in respect of which it is entitled to be indemnified. Such notice shall be given as soon as reasonably practicable after the indemnified Party becomes aware of such claim. The indemnifying Party shall be liable to settle the indemnification claim within thirty (30) Days of receipt of the above notice. However, if:
  - a. the Parties choose to refer the dispute before the Arbitrator in accordance with Article 74; and
  - b. the claim amount is not required to be paid/ deposited to such third party pending the resolution of the Dispute;
- ii. the indemnifying Party shall become liable to pay the claim amount to the indemnified Party or to the third party, as the case may be, promptly following the resolution of the Dispute, if such Dispute is not settled in favour of the indemnifying Party.

- iii. An indemnifying Party may, at its own expense, assume control of the defence of any proceedings brought against it by the indemnified Party.

### **63. INDEMNIFIABLE LOSSES**

- 63.1. Where an indemnified Party is entitled to indemnifiable losses from the indemnifying Party pursuant to Article 61.1(ii), the indemnified Party shall promptly notify the Indemnifying Party of the indemnifiable losses actually incurred by the indemnified Party. The indemnifiable losses shall be reimbursed by the indemnifying Party within thirty (30) Days of receipt of the notice seeking indemnifiable losses by the indemnified Party. In case of non-payment of such losses after a valid notice under this Article, such event shall constitute a payment default under Article 55 and 56.

### **64. LIMITATION ON LIABILITY**

- 64.1. Except as expressly provided in this PPA, neither the SPD nor its/ their respective officers, directors, agents, employees or affiliates (or their officers, directors, agents or employees), shall be liable or responsible to the other Party or its affiliates, officers, directors, agents, employees, successors or permitted assigns or their respective insurers for incidental, indirect or consequential damages, connected with or resulting from performance or non-performance of this PPA, or anything done in connection herewith, including claims in the nature of lost revenues, income or profits (other than payments expressly required and properly due under this PPA), any increased expense of, reduction in or loss of power generation or equipment used therefore, irrespective of whether such claims are based upon breach of warranty, tort (including negligence, the SPD or others), strict liability, contract, breach of statutory duty, operation of law or otherwise.
- 64.2. Procurer shall have no recourse against any officer, director or shareholder of the SPD or any affiliate of the SPD or any of its officers, directors or shareholders for such claims excluded under this Article. The SPD shall have no recourse against any officer, director or shareholder of the Procurer and Nodal Agency, or any affiliate of Procurer or any of its officers, directors or shareholders for such claims excluded under this Article.
- 64.3. Notwithstanding anything to the contrary contained elsewhere in this PPA, the provisions of this Article 64 shall apply mutatis mutandis to either party.

### **65. DUTY TO MITIGATE**

- 65.1. The Parties shall endeavour to take all reasonable steps so as mitigate any loss or damage which has occurred under Articles 61 and 64.

## GENERAL COVENANTS

### 66. SOLAR POWER DEVELOPER'S COVENANTS

66.1. The SPD covenants and agrees to the following:

- i. **Notice of Damage or Emergency:** The SPD shall (a) promptly notify Procurer if it becomes aware of any damage to or loss of the use of the Project or that could reasonably be expected to adversely affect the Project, (b) immediately notify Procurer once it becomes aware of any event or circumstance that poses an imminent risk to human health, the environment, the Project or the Premises.
- ii. **Project Condition:** The SPD shall take all actions reasonably necessary to ensure that the Project is capable of generation and delivery of solar energy at agreed rate as per PPA & RFP. Subject to there being no Procurer's Event of Default, the SPD shall provide 24X7 onsite / offsite monitoring and maintenance of the Project throughout the period of this PPA at no additional cost.
- iii. **Consents and Approvals:** While providing the installation work, solar power and system operations, the SPD shall obtain and maintain and secure all Consents and Approvals required to be obtained and maintained and secured by the SPD and to enable the SPD to perform such obligations as required under PPA and RFP.
- iv. **Interconnection with DISCOM:** The interconnection of the Project with the network of the DISCOM shall be made as per the technical standards for connectivity of distributed generated resources regulations as may be notified by the concerned authority. The interconnection of the Project shall be as per the provisions of the Regulations/ Guidelines issued by the concerned authority.
- v. **Health and Safety:** The SPD shall take all necessary and reasonable safety precautions with respect to providing the installation work, solar energy, and system operations that shall comply with all Applicable Laws pertaining to the health and safety of persons and real and personal property.

### 67. SOLAR POWER DEVELOPER'S REPRESENTATIVES

67.1. During the subsistence of this PPA, the SPD undertakes to respond to all questions, concerns and complaints of the Procurer and Nodal Agency regarding the Project in a prompt and efficient manner. The SPD designates the following individual as its representative pertaining to performance of this PPA for the period from Effective date till last Unit COD:

Name:

Telephone:

E-mail:

67.2. The SPD designates the following individual as its representative and primary point of

contact pertaining to performance of this PPA following the last Unit COD till

Expiry Date: Name: \_\_\_\_\_ – Project Manager

Telephone: +91 \_\_\_\_\_

E-mail: \_\_\_\_\_

## 68. PROCURER'S COVENANTS

68.1. Procurer covenants and agrees to the following:

i. **Notice of Damage or Emergency:** Procurer shall (a) promptly notify the SPD if it becomes aware of any damage to or loss of the use of the Project or that could reasonably be expected to adversely affect the Project; (b) immediately notify the SPD once it becomes aware of any event or circumstance that poses an imminent risk to human health, the environment, the Project or the Premises.

ii. **Consents:** The Procurer shall cooperate with the SPD to obtain such approvals, permits, rebates or other financial incentives including those required for installation of Project at the Premises and to draw/ consume/ sell solar energy. However, it would be sole responsibility of SPD to obtain such approvals, permits, rebates or other financial incentives including those required for installation of Project at the Premises and to draw/ consume/ sell solar energy.

The Procurer should grant similar access/grants/licenses to the Lenders and Lenders Representative to enable them smooth access to the site for site inspection.

a. In cases, where the Procurer and Building Owner are different, then similar undertaking for access to premises in favor of Lenders has to be provided by the Building Owner.

iii. **Access to Premises, Grant of Licenses:** Procurer hereby grants to the SPD a license co-terminus with the Term of PPA, containing all the rights necessary for the SPD to use and occupy portions of the Premises for the installation, operation and maintenance of the Project pursuant to the terms of this PPA, including ingress and egress rights to the Premises for the SPD and its employees, agents, contractors and subcontractors and access to electrical panels and conduits to interconnect or disconnect the Project with the Premises' electrical wiring with the consent and approval of the Procurer's authorized representative identified by the Procurer.

iv. **Security:** Procurer shall be responsible for maintaining the physical security of the Premises. Procurer will not conduct activities on, in or about the Premises that have a reasonable likelihood of causing damage, impairment or otherwise adversely affecting the Project.

a. Regardless of whether Procurer is owner of the Premises or leases the



shall have access to the Premises and Project during the Term of this PPA and for so long as needed after termination to remove the Project pursuant to the applicable provisions herein, and (b) neither Procurer nor Procurer's owner will interfere or handle any of the SPD's equipment or the Project without written authorization from the SPD.

- v. **Temporary storage space during installation or removal:** Procurer shall provide sufficient space at the Premises for the temporary storage and staging of tools, materials and equipment and for the parking of construction crew vehicles and temporary construction trailers and facilities reasonably necessary during the installation work, Project operations or Project removal, and access for rigging and material handling.
- vi. **Storage space during O&M period:** Procurer shall provide some space, if required, for keeping minimum tools and tackles compulsory for O &M activities, from Commissioning to Expiry Date. Also, if required, minimum necessary equipment shall be kept at or near the Premises, with due permission from Procurer.
- vii. **Sunlight Easements:** Procurer will take all reasonable actions as necessary to prevent other buildings, structures or flora from overshadowing or otherwise blocking access of sunlight to the Project, including but not limited to such actions as may be reasonably necessary to obtain a solar access easement for such purpose.
  - a. In the event that the Procurer fails to ensure adequate space for Project to ensure that other structures within his premises do not partially or wholly shade any part of the Project and if such shading occurs, the SPD may apply for Deemed Generation furnishing the calculation for loss in revenue due to such shading supported by the relevant data, which shall be approved by Procurer within one month of submission failing which the SPD shall claim provisional Deemed Generation till the issue is finally settled. In case, Procurer requested to shift the Project within the Premises to reduce/minimize the impact of shading then complete cost of shifting shall be borne by the Procurer. The costing would be as per latest Standard of Rates (SOR) published by concerned DISCOM for similar works;
  - b. In the event that the Procurer fails to ensure adequate space for Project to ensure that other structures outside his premises do not partially or wholly shade any part of the Project and if such shading occurs, the SPD may apply for 80% of Deemed Generation furnishing the calculation for loss in revenue due to such shading supported by the relevant data, which shall be approved by Procurer within one month of submission failing which the SPD shall claim provisional Deemed Generation till the issue is finally settled. In case, Procurer requested to shift the Project within the Premises to reduce/minimize the impact of shading then 80% of cost of shifting shall be borne by the Procurer and remaining will be borne by SPD. The costing would be as per latest Standard of Rates (SOR) published by concerned DISCOM for similar works.
- viii. **Evacuation:** Procurer shall offtake 100% of the solar energy generated, as per PPA Capacity as agreed under this PPA, from the Delivery Point(s), and pay all invoices raised by the SPD under this PPA by the Due Date and pay interest on delayed payments, if any, as per this PPA.
- ix. **Water:** SPD shall arrange water, as per the requirements of the SPD, for periodic cleaning of the solar panels. The raw water connection point may be provided by

Procurer at site but water bill or charges against such connection shall be borne by SPD and to be mutually agreed between the Parties.

**69. PROCURER'S REPRESENTATIVES**

- 69.1. During the subsistence of this PPA, the Procurer undertakes to respond to all questions, concerns and complaints of the SPD regarding the Project in a prompt and efficient manner. The Procurer designates the following individual as its representative pertaining to performance of this PPA during the Term of PPA:

Name: \_\_\_\_\_

Telephone: \_\_\_\_\_,

E-mail: \_\_\_\_\_

## **ASSIGNMENTS AND CHARGES**

### **70. ASSIGNMENTS**

- 70.1. This PPA shall be binding upon and inure to the benefit of the Parties and their respective successor and permitted assign. This PPA shall not be assigned by any Party other than by mutual consent between the Parties to be provided and evidenced in writing.
- 70.2. Provided that, respective successor or permitted assign shall meet eligibility criteria as per RFP and shall not be inferior, in any respect, to the concerned Party.
- 70.3. Provided that, Procurer shall permit assignment of any of SPD's rights and obligations under this PPA in favour of lenders of the SPD, if required under the Financing agreement.
- 70.4. Provided that, such consent shall not be withheld if Procurer seeks to transfer to any transferee all of its rights and obligations under this PPA.
- 70.5. Provided further that any successor or permitted assign identified after mutual PPA between the Parties may be required to execute a new PPA on the same terms and conditions as are included in this PPA.

### **71. PERMITTED CHARGES**

- 71.1. SPD will have right to create encumbrance on the Project during the term of this contract.
- 71.2. SPD shall not create or permit to subsist any encumbrance over all or any of its rights and benefits under this PPA, other than as set forth in Article 70.

## **GOVERNING LAW AND DISPUTE RESOLUTION**

### **72. GOVERNING LAW**

- 72.1. This PPA shall be governed by and construed in accordance with the Laws of India. Any legal proceedings in respect of any matters, claims or disputes under this PPA shall be under the jurisdiction of appropriate courts in Bhopal/ Jabalpur/ Indore.

### **73. AMICABLE SETTLEMENT**

- 73.1. Either Party is entitled to raise any claim, dispute or difference of whatever nature arising under, out of or in connection with PPA or RFP ("Dispute") by giving a written notice (Dispute Notice) to the other Party, which shall contain:
- i. a description of the Dispute;
  - ii. the grounds for such Dispute; and
  - iii. all written material in support of its claim
- 73.2. The other Party shall, within thirty (30) Days of issue of Dispute Notice issued under Article 73.1, furnish:
- i. Counterclaim and defences, if any, regarding the Dispute; and
  - ii. all written material in support of its defences and counterclaim.
- 73.3. Within thirty (30) Days of issue of Dispute Notice by any Party pursuant to Article 73.1 if the other Party does not furnish any counter claim or defence under Article 73.2 or thirty (30) Days from the date of furnishing counter claims or defence by the other Party, both the Parties to the Dispute shall meet amicably to settle such Dispute. If the Parties fail to resolve the Dispute amicably within thirty (30) Days from the later of the dates mentioned in this Article 73.3, the Dispute shall be referred for dispute resolution in accordance with Article 74.

### **74. DISPUTE RESOLUTION**

- 74.1. In case of dispute with DISCOM related to Net-Meter, SPD shall seek Appropriate Commission help and other parties will extend their full support in getting favourable decision;
- 74.2. In case of Disputed Bills, it shall be open to the aggrieved Party to approach the district level coordination committee (DLC), Nodal Agency and/or Court for dispute resolution in accordance with settled Law and also for interim orders protecting its interest and the Parties shall be bound by the decision of the Nodal Agency/ Court.

Dispute Resolution by the DLC and Nodal Agency

- 74.3. In case of any dispute involving SPD and Procurer, it would be referred to district level coordination committee (DLC) for amicable resolution. If unresolved at DLC level, the matter would be referred to Nodal Agency.
- 74.4. Nodal Agency can be approached by either Party for settlement of a dispute, not limited the following :

- i. Where any Dispute (i) arises from a claim made by any Party for any matter related to Tariff or claims made by any Party which partly or wholly relate to any change in the Tariff or determination of any of such claims could result in change in the Tariff, or (ii) relates to any matter agreed to be referred to the Nodal Agency, such Dispute shall be submitted to the Nodal Agency.

#### Dispute Resolution through Arbitration

- 74.4. Dispute shall be resolved by arbitration under the provisions of the “Madhya Pradesh Madhyastham Adhikaran Adhiniyam, 1983”, as amended, as under, provided not settled amicably as per this Article 74. In such events, any party to such Dispute may refer the matter to registrar under the Rules of the Indian Council of Arbitration:
- i. The Arbitration Tribunal shall consist of three (3) Arbitrators. Each party shall appoint one Arbitrator within thirty (30) Days of the receipt of request for settlement of dispute by Arbitration. The two appointed Arbitrators shall within 30 Days of their appointment, appoint a third Arbitrator who shall act as presiding Arbitrator. In case the party fails to appoint an Arbitrator within thirty (30) Days from the date of receipt of request or the two appointed Arbitrator fails to agree on third Arbitrator within 30 Days of their appointment, the appointment of Arbitrator, as the case may be, shall be made in accordance with the Indian Arbitration and Conciliation Act, 1996.
  - ii. The place of arbitration shall be Bhopal/ Jabalpur/ Indore. The language of the arbitration shall be English.
  - iii. The Arbitration Tribunal's award shall be substantiated in writing. The Arbitration Tribunal shall also decide on the costs of the arbitration proceedings and the allocation thereof.
  - iv. The provisions of this Article shall survive the termination of this PPA for any reason whatsoever.
  - v. The award shall be of majority decision. If there is no majority, the award will be given by the presiding Arbitrator.
  - vi. Procurer shall be entitled to co-opt DISCOMs as a supporting party in such arbitration proceedings.

#### **75. PARTIES TO PERFORM OBLIGATIONS**

- 75.1. Notwithstanding the existence of any Dispute and difference referred to the Arbitration Tribunal as provided in Article 74 and save as the Arbitration Tribunal may otherwise direct by a final or interim order, the Parties hereto shall continue to perform their respective obligations (which are not in dispute) under this PPA or RFP.

## **SUBSTITUTION RIGHTS OF LENDERS**

### **76. SUBSTITUTION OF THE SOLAR POWER DEVELOPER**

- 76.1. Subject to the terms of the PPA, upon occurrence of an SPD Event of Default under the PPA, the Lenders shall, have the right to seek substitution of the SPD by a Selectee, meeting or exceeding eligibility criteria as per PPA or/ and RFP, for the residual period of the PPA, for the purposes of securing the payments of the Total Debt Amount from the SPD and performing the obligations of the SPD, in accordance with the provisions of this Article.
- 76.2. The Lenders may seek to exercise right of substitution by an amendment or novation of the PPA and other Project Documents executed between Procurer and the SPD in favour of the Selectee, Procurer and the SPD shall cooperate with the Lenders to carry out such substitution.

### **77. PROCURER PRELIMINARY DEFAULT NOTICE**

- 77.1. Procurer shall, simultaneously to delivering a Procurer Preliminary Default Notice to the SPD, also issue a copy of it to the Lenders.

### **78. SUBSTITUTION NOTICE**

- 78.1. In the event of failure of the SPD to rectify the Event of Default giving rise to Procurer Preliminary Default Notice, the lenders, upon receipt of a written advice from Procurer confirming such failure, either on their own or through its representative ("the Lenders' Representative") shall be entitled to notify Procurer and the SPD of the intention of the Lenders to substitute the SPD by the Selectee, meeting or exceeding eligibility criteria as per PPA or/ and RFP, for the residual period of the PPA (the "Substitution Notice").

### **79. INTERIM OPERATION OF PROJECT**

- 79.1. On receipt of a Substitution Notice, no further action shall be taken by any Party to terminate the PPA, except under and in accordance with the terms of this Article of this PPA.
- 79.2. On issue of a Substitution Notice, the Lenders shall have the right to request Procurer to enter upon and takeover the Project for the interim and till the substitution of the Selectee is complete and to otherwise take all such steps as are necessary for the continued operation and maintenance of the Project, including levy, collection and appropriation of payments there under, subject to, the servicing of monies owed in respect of the Total Debt Amount as per the Financing agreements and the SPD shall completely cooperate in any such takeover of the Project by Procurer. If Procurer, at its sole and exclusive discretion agrees to enter upon and takeover the Project, till substitution of the Selectee in accordance with this PPA, Procurer shall be compensated for rendering such services in accordance with Article 83 herein.
- 79.3. If Procurer refuses to take over the Project on request by the Lenders in accordance with Article 79.2 above, the SPD shall have the duty and obligation to continue to operate the

Project in accordance with the PPA till such time as the Selectee is finally substituted under Article 81.10 hereof.

- 79.4. The Lenders and Procurer shall, simultaneously have the right to commence the process of substitution of the SPD by the Selectee in accordance with these terms and the SPD hereby irrevocably consents to the same.

## **80. PROCESS OF SUBSTITUTION OF SOLAR POWER DEVELOPER**

- 80.1. The Lenders' Representative may, on delivery of a Substitution Notice notify Procurer and the SPD on behalf of all the Lenders about the Lenders' decision to invite and negotiate, at the cost of the Lenders, offers from third parties to act as Selectee, either through private negotiations or public auction and / or a tender process, for the residual period of the PPA. Subject to and upon approval of, such Selectee shall be entitled to receive all the rights of the SPD and shall undertake all the obligations of the SPD under the PPA and other Project Documents executed between the SPD and Procurer, in accordance with these terms of substitution.
- 80.2. The Lenders and the SPD shall ensure that, upon Procurer approving the Selectee, the SPD shall transfer absolutely and irrevocably, the ownership of the Project to such Selectee simultaneously with the amendment or novation of the PPA and other Project Documents executed between the SPD and Procurer in favour of the Selectee as mentioned in Article 76.2.

## **81. MODALITY FOR SUBSTITUTION**

Criteria for selection of the Selectee:

- 81.1. The Lenders and / or the Lenders' Representative shall in addition to any other criteria that they may deem fit and necessary, apply the following criteria in the selection of the Selectee:
- i. if the SPD is proposed to be substituted during the Construction Period, the Selectee shall possess the financial capability used to pre-qualify bidders in the RFQ stage (including the methodology prescribed therein) to perform and discharge all the residual duties, obligations and liabilities of the under the PPA. If the SPD is proposed to be substituted during the Operation Period, these criteria shall not be applicable.
  - ii. the Selectee shall have the capability and shall unconditionally consent to assume the liability for the payment and discharge of dues, if any, of the SPD to Procurer under and in accordance with the PPA and also payment of the Total Debt Amount to the Lenders upon terms and conditions as agreed to between the Selectee and the Lenders;
  - iii. the Selectee shall have not been in breach of any PPA between the Selectee and any Bank or any Lender or between the Selectee and Procurer, involving sums greater than Rupees fifty (50) lakhs at any time in the last two (2) Contract Years as on the date of the substitution of the SPD.
  - iv. any other appropriate criteria, whereby continuity in the performance of the

Selectee's obligations under the PPA is maintained and the security in favour of the Lenders under the Financing agreements is preserved.

#### Modalities

The following modalities shall be applicable to any substitution of the SPD by the Selectee pursuant to this PPA:

- 81.2. The Lenders' Representative shall on behalf of the Lenders propose to Procurer (the "Proposal") pursuant to Article 81.3 below, the name of the Selectee for acceptance, seeking:
- i. grant of all the rights and obligations under the PPA and the other Project Documents executed between Procurer and the SPD, to the Selectee (as substitute for the SPD);
  - ii. amendment of the PPA and the other Project Documents executed between Procurer and the SPD, to the effect that the aforementioned grant to the Selectee, shall be such that the rights and obligations assumed by the Selectee are on the same terms and conditions for the residual period of the PPA as existed in respect of the SPD under the original PPA and the other Project Documents executed between Procurer and the SPD; and
  - iii. the execution of new PPAs as necessary, by the proposed Selectee for the residual period of the PPA on the same terms and conditions as are included in this PPA.
- 81.3. The Proposal shall contain the particulars and information in respect of the Selectee the data and information as any of Procurer may reasonably require. Procurer may intimate any additional requirement within thirty (30) Days of the date of receipt of the Proposal.
- 81.4. The Proposal shall be accompanied by an unconditional undertaking by the Selectee that it shall, upon approval by Procurer of the Proposal:
- i. observe, comply, perform and fulfil the terms, conditions and covenants of the PPA and all Project Documents executed between SPD and Procurer or a new power purchase PPA or respective Project Document (in the case of the novation thereof), which according to the terms therein are required to be observed, complied with, performed and fulfilled by the SPD, as if such Selectee was the SPD originally named under the PPA; or the respective Project Document; and
  - ii. be liable for and shall assume, discharge and pay the Total Debt Amount or then outstanding dues to the Lenders under and in accordance with the Financing agreements or in any other manner agreed to by the Lenders and Procurer as if such Selectee was the SPD originally named under such Financing agreements.
- 81.5. At any time prior to taking a decision in respect of the Proposal received under Article 81, Procurer may require the Lender / Lenders' Representative to satisfy it as to the eligibility of the Selectee. The decision of Procurer as to acceptance or rejection of the Selectee, shall be made reasonably and when made shall be final, conclusive and binding on the Parties.



81.6. Procurer shall convey its approval or disapproval of such Proposal to the Lender / Lender's Representative. Such decision shall be made by Procurer at their reasonably exercised discretion within twenty-one (21) Days of:

- i. the date of receipt of the Proposal by the Procurers; or
- ii. the date when the last of further and other information and clarifications in respect of any data, particulars or information included in the Proposal requested by any of Procurer under Article 81 above is received; whichever is later.

If there is no decision is made within twenty-one (21) Days, it shall be considered as deemed approval.

81.7. Notwithstanding anything to the contrary mentioned in this PPA, the approval of the Procurer for the Selectee shall not be withheld in case the Selectee meets the criteria mentioned in Article 81.

81.8. Upon approval of the Proposal and the Selectee by Procurer, the Selectee mentioned in the Proposal shall become the Selectee hereunder.

81.9. Following the rejection of a Proposal, the Lenders and/or the Lenders' Representative shall have the right to submit a fresh Proposal, proposing another Selectee (if the rejection was on the grounds of an inappropriate third party proposed as Selectee) within sixty (60) Days of receipt of communication regarding rejection of the Selectee previously proposed. The provisions of this Article shall apply mutatis mutandis to such fresh Proposal.

81.10. The substitution of the SPD by the Selectee shall be deemed to be complete upon the Selectee executing all necessary documents and writings with or in favour of the SPD, Procurer and the Lenders so as to give full effect to the terms and conditions of the substitution, subject to which the Selectee has been accepted by the Lenders and Procurer and upon transfer of ownership and complete possession of the Project by Procurer or the SPD, as the case may be, to the Selectee. Procurer shall novate all the Project Documents, which they had entered in to with the SPD in order to make the substitution of the SPD by the Selectee effective. The quantum and manner of payment of the consideration payable by the Selectee to the SPD towards purchase of the Project and assumption of all the rights and obligations of the SPD under the PPA and the Project Documents as mentioned in this PPA shall be entirely between the SPD, Selectee and the Lenders and Procurer shall in no way be responsible to bear the same.

81.11. Upon the substitution becoming effective pursuant to Article 81.10 above, all the rights of the SPD under the PPA shall cease to exist:

Provided that, nothing contained in this Article shall prejudice any pending / subsisting claims of the SPD against a Procurer or any claim of Procurer against the erstwhile SPD or the Selectee.

81.12. The Selectee shall, subject to the terms and conditions of the substitution, have a period of ninety (90) Days to rectify any breach and / or default of the SPD subsisting on the date of substitution and required to be rectified and shall incur the liability or consequence on account of any previous breach and / or default of the SPD.

- 81.13. The decision of the Lenders and Procurer in the selection of the Selectee shall be final and binding on the SPD and shall be deemed to have been made with the concurrence of the SPD. The SPD expressly waives all rights to object or to challenge such selection and appointment of the Selectee on any ground whatsoever.
- 81.14. The Lenders shall be solely and exclusively responsible for obtaining any and all consents/approvals or cooperation, which may be required to be obtained from the SPD under this PPA and Procurer shall not be liable for the same.
- 81.15. All actions of the Lenders' Representative hereunder shall be deemed to be on behalf of the Lenders and shall be binding upon them. The Lenders' Representative shall be authorised to receive payment of compensation and any other payments, including the consideration for transfer, if any, in accordance with the Proposal and the Financing agreements and shall be bound to give valid discharge on behalf of all the Lenders.

## **82. SOLAR POWER DEVELOPER'S WAIVER**

- 82.1. The SPD irrevocably agrees and consents (to the extent to which applicable law may require such consent) to any actions of the Lenders, the Lender's Representative and Procurer or exercise of their rights under and in accordance with these terms.
- 82.2. The SPD irrevocably agrees and consents (to the extent to which applicable law may require such consents) that from the date specified in Article 81, it shall cease to have any rights under the PPA or the Financing agreements other than those expressly stated therein.
- 82.3. The SPD warrants and covenants that any PPA entered into by it, in relation to the Project, shall include a legally enforceable clause providing for automatic novation of such PPA in favour of the Selectee, at the option of the Lenders or Procurer. The SPD further warrants and covenants that, in respect of any PPAs which have already been executed in relation to the Project and which lack a legally enforceable clause providing for automatic novation of such PPA, the SPD shall procure an amendment in the concluded PPA to incorporate such clause.

## **83. INTERIM PROTECTION OF SERVICE AND PRESERVATION OF SECURITY**

### **Appointment of a Receiver**

- 83.1. In every case of the Lenders issuing a Substitution Notice and Procurer refusing to take over the Project and the SPD failing to operate the Project in accordance with Article 79 above and Procurer not electing to act as Receiver as per Article 83 below, the Lenders may institute protective legal proceedings for appointment of a receiver (the "Receiver") to maintain, preserve and protect the assets held as security by the Lenders if such right is granted under the terms of the Financing agreements.
- 83.2. Provided that in event of Procurer refusing to take over the Project and the SPD failing to operate the Project in accordance with Article 79 above, and if the assets of the Project are, in the opinion of Procurer, necessary and required for the operation and maintenance of the Project, Procurer shall be entitled to elect to act as the Receiver for the purposes of this Article and be entitled to maintain, preserve and protect the said assets by engaging an operator/service provider to act on their behalf and the Lenders and SPD hereby consent and agree to the same. Upon Procurer so intimating the SPD

and the Lender's representative their desire to act as Receiver, the SPD and the Lender's representative shall co-operate with Procurer to facilitate the same.

- 83.3. Upon appointment of the Court appointed Receiver or Procurer acting as Receiver, all the Receivables received by such Receiver shall be deposited by the Receiver in the bank account jointly designated by PROCURER and the Lenders. The Receiver shall be responsible for protecting the assets in receivership and shall render a true and proper account of the receivership to the lenders in accordance with the terms of its appointment.
- 83.4. When acting as a Receiver or operator in accordance with this Article 83 or Article 79, Procurer shall be entitled to be remunerated for such services as may be determined by Central Electricity Regulatory Commission. Furthermore, when acting as a Receiver, Procurer shall not be liable to the Lenders, the Lenders' Representative, SPD or any third party for any default under the PPA, damage or loss to the Power Station or for any other reason whatsoever, except for wilful default of Procurer.

#### **84. SUBSTITUTION CONSIDERATION**

- 84.1. The Lenders and Procurer shall be entitled to appropriate any consideration received for the substitution of the SPD as hereinabove provided, from the Selectee towards the payment of Lenders' and Procurer's respective dues, to the exclusion of the SPD.
- 84.2. The SPD shall be deemed to have nominated, constituted and appoints the Lenders' Representative as its constituted attorney for doing all acts, deeds and things as may be required to be done for the substitution of the SPD by the Selectee pursuant to these terms.

#### **85. CHANGE IN LENDERS**

- 85.1. The Parties hereto acknowledge that during the subsistence of the PPA, it is possible that any Lender may cease to remain as a Lender by reason of repayment of the debt or otherwise. Further it may possible that any Lender may be substituted, or a new Lender may be added. In the event of any Lender ceasing to be a party to the PPA or Financing agreement respectively, the term and conditions as prescribed in this Articles shall cease to automatically apply to such Lender as the case may be. Further, upon any entity being added as a Lender and in the event such entity is given the right to substitute the SPD under the Financing agreement and then the contents of this Article shall be applicable to the exercise of such right by the said new entity.

## **REPRESENTATIONS & WARRANTIES**

### **86. REPRESENTATIONS AND WARRANTIES OF PROCURER**

- 86.1. Procurer hereby represents and warrants to and agrees with the SPD as follows and acknowledges and confirms that the SPD is relying on such representations and warranties in connection with the transactions described in this PPA:
- 86.2. Procurer has all requisite powers authorising and has been duly authorised to execute and consummate this PPA;
- 86.3. This PPA is enforceable against Procurer in accordance with its terms;
- 86.4. The consummation of the transactions contemplated by this PPA on the part of Procurer will not violate any provision of nor constitute a default under, nor give rise to a power to cancel any charter, mortgage, deed of trust or lien, lease, PPA, license, permit, evidence of indebtedness, restriction, or other contract to which Procurer is a party or to which Procurer is bound, which violation, default or power has not been waived;
- 86.5. Procurer is not insolvent, and no insolvency proceedings have been instituted, nor threatened or pending by or against Procurer;
- 86.6. There are no actions, suits, claims, proceedings or investigations pending or, to the best of Procurer's knowledge, threatened in writing against Procurer at law, in equity, or otherwise, and whether civil or criminal in nature, before or by, any court, commission, arbitrator or governmental agency or authority, and there are no outstanding judgements, decrees or orders of any such courts, commission, arbitrator or governmental agencies or authorities, which materially adversely affect its ability to comply with its obligations under this PPA.
- 86.7. Procurer makes all the representations and warranties above to be valid as on the Execution Date of the PPA.

### **87. REPRESENTATIONS AND WARRANTIES OF THE SOLAR POWER DEVELOPER**

- 87.1. The SPD hereby represents and warrants to and agrees with Procurer as follows and acknowledges and confirms that Procurer is relying on such representations and warranties in connection with the transactions described in this PPA.
- 87.2. The SPD has all requisite power authorising and has been duly authorised to execute and consummate this PPA;
- 87.3. This PPA is enforceable against the SPD in accordance with its terms;
- 87.4. The consummation of the transactions contemplated by this PPA on the part of the SPD will not violate any provision of nor constitute a default under, nor give rise to a power to cancel any charter, mortgage, deed of trust or lien, lease, PPA, license, permit, evidence of indebtedness, restriction, or other contract to which the SPD is a party or to which the SPD is bound which violation, default or power has not been waived;
- 87.5. The SPD is not insolvent, and no insolvency proceedings have been instituted, or not threatened or pending by or against the SPD.
- 87.6. There are no actions, suits, claims, proceedings or investigations pending or, to the best of SPD's knowledge, threatened in writing against the SPD at law, in equity, or otherwise,

and whether civil or criminal in nature, before or by, any court, commission, arbitrator or governmental agency or authority, and there are no outstanding judgements, decrees or orders of any such courts, commission, arbitrator or governmental agencies or authorities, which materially adversely affect its ability to execute the Project or to comply with its obligations under this PPA.

The SPD makes all the representations and warranties above to be valid as on the Execution Date of the PPA.

#### MISCELLANEOUS PROVISIONS

### **88. AMENDMENT**

- 88.1. This PPA may be amended or supplemented by a written PPA between the Parties or their successor and permitted assign and after duly obtaining the approval of the Appropriate authority, if necessary and relevant except in the two situations wherein.
- i. PPA capacity may be amended through the SCHEDULE 5: LETTER FROM NODAL AGENCY CONFIRMING THE CAPACITY issued by the Nodal Agency in the favour of SPD and Procurer both.
  - ii. PPA tariff may be amended through the SCHEDULE 6: LETTER FROM NODAL AGENCY CONFIRMING COD AND APPLICABLE TARIFF issued by the Nodal Agency in the favour of SPD and Procurer both.

### **89. THIRD PARTY BENEFICIARIES**

- 89.1. This PPA is solely for the benefit of the Parties and their respective successors and permitted assigns and shall not be construed as creating any duty, standard of care or any liability to, any person not a party to this PPA.

### **90. INDUSTRY STANDARD**

- 90.1. Except as otherwise set forth herein, for the purpose of the PPA the normal standards of performance within the solar photovoltaic power generation industry in the relevant market shall be the measure of whether a Party's performance is reasonably and timely. Unless expressly defined herein, words having well-known technical or trade meaning or under popular market practice at the time of execution of PPA or meaning under Law shall be so construed.

### **91. WAIVER**

- 91.1. No waiver by either Party of any default or breach by the other Party in the performance of any of the provisions of this PPA shall be effective unless in writing duly executed by an authorised representative of such Party.
- 91.2. Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this PPA nor time or other indulgence granted by one Party to the other Parties shall act as a waiver of such breach or acceptance of any variation or the relinquishment of any such right or any other right under this PPA, which shall remain in full force and effect.

### **92. ENTIRETY**

- 92.1. This PPA and the Schedules/ Annexures along with the Letter issued by the Nodal Agency in the SCHEDULE 5: LETTER FROM NODAL AGENCY CONFIRMING THE CAPACITY and SCHEDULE 6: LETTER FROM NODAL AGENCY CONFIRMING COD AND APPLICABLE TARIFF format are intended by the Parties as the final expression

of their PPA and are intended also as a complete and exclusive statement of the terms of their PPA.

- 92.2. Except as provided in this PPA, all prior written or oral understandings, offers or other communications of every kind pertaining to this PPA or the sale or purchase of solar energy under this PPA to Procurer by the SPD shall stand superseded and abrogated.

### **93. CONFIDENTIALITY**

- 93.1. The Parties undertake to hold in confidence this PPA and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:
- i. to their professional advisors;
  - ii. to their officers, contractors, employees, agents or representatives, financiers, who need to have access to such information for the proper performance of their activities; or
  - iii. disclosures required under Law.
  - iv. without the prior written consent of the other Party.
- 93.2. Provided that the SPD agrees and acknowledges that Procurer may at any time, disclose the terms and conditions of the PPA and the Project Documents to any person, to the extent stipulated under the Law.

### **94. AFFIRMATION**

- 94.1. The SPD and Procurer, each affirm that:
- i. neither it nor its respective directors, employees, or agents has paid or undertaken to pay or shall in the future pay any unlawful commission, bribe, pay- off or kick-back; and
  - ii. it has not in any other manner paid any sums, whether in Indian currency or foreign currency and whether in India or abroad to the other Party to procure this PPA, and the SPD and Procurer hereby undertake not to engage in any similar acts during the Term of PPA.

### **95. SEVERABILITY**

- 95.1. The invalidity or unenforceability, for any reason, of any part of this PPA shall not prejudice or affect the validity or enforceability of the remainder of this PPA, unless the part held invalid or unenforceable is fundamental to this PPA or remainder of this PPA.

### **96. NO PARTNERSHIP**

- 96.1. None of the provisions of this PPA shall constitute a partnership or agency or any such similar relationship between the SPD and Procurer.

### **97. NOTICES**

- 97.1. All notices or other communications which are required to be given under this PPA shall be in writing and in the English language.
- 97.2. If to the SPD, all notices or other communications which are required must be delivered personally or by registered post or facsimile or any other method duly acknowledged to

the address(es) below:

Address :  
Attention :  
Email :  
Fax. No. :  
Telephone No.  
:

- 97.3. If to Procurer, all notices or communications must be delivered personally or by registered post or facsimile or any other mode duly acknowledged to the address(es) below:

Address :  
Attention :  
Email :  
Fax. No. :  
Telephone No. :

- 97.4. All notices or communications given by e-mail or facsimile shall be confirmed by sending a copy of the same via post office in an envelope properly addressed to the appropriate Party for delivery by registered mail. All notices shall be deemed validly delivered upon receipt evidenced by an acknowledgement of the recipient, unless the Party delivering the notice can prove in case of delivery through the registered post that the recipient refused to acknowledge the receipt of the notice despite efforts of the postal authorities.

- 97.5. Any Party may by notice of at least fifteen (15) Days to the other Party change the address and/or addresses to which such notices and communications to it are to be delivered or mailed.

## **98. LANGUAGE**

- 98.1. All correspondence and communications between the Parties relating to this PPA and all other documentation to be prepared and supplied under the PPA shall be written in English, and the PPA shall be construed and interpreted in accordance with English language convention and practice.
- 98.2. If any of the correspondence, communications or documents is prepared in any language other than English, the English translation of such correspondence, communications or documents shall prevail in matters of interpretation.

## **99. BREACH OF OBLIGATIONS**

- 99.1. The Parties acknowledge that a breach of any of the obligations contained herein would result in injuries as per Law. The Parties further acknowledge that the amount of the Liquidated Damages or the method of calculating the Liquidated Damages specified in this PPA is a genuine and reasonable pre-estimate of the damages that may be suffered by the non-defaulting party in each case specified under this PPA.

## **100. NOMINATION RESTRICTION**

- 100.1. Notwithstanding anything contained to the contrary in this PPA, wherever a reference is made to the right of a Procurer to nominate a third Party to receive benefits under this PPA, such third party shall have a financial standing comparable to that of Procurer.

**101. COMMERCIAL ACTS**

- 101.1. Procurer and SPD unconditionally and irrevocably agree that the execution, delivery and performance by each of them of this PPA to which it is a Party constitute private and commercial acts rather than public or governmental acts.

**102. RESTRICTION OF SHAREHOLDERS / OWNERS' LIABILITY**

- 102.1. Parties expressly agree and acknowledge that none of the shareholders of the Parties hereto shall be liable to the other Parties for any of the contractual obligations of the concerned Party under this PPA. Further, the financial liabilities of the shareholder/s of each Party to this PPA, in such Party, shall be restricted to the extent provided in relevant Section of the Indian Companies Act, 1956 or 2013 as amended or replaced.
- 102.2. The provisions of this Article 102 shall supersede any other prior PPA or understanding, whether oral or written, that may be existing between Procurer, SPD, shareholders/ owners of the SPD or shareholders/ owners of Procurer before the date of this PPA, regarding the subject matter of this PPA.

**103. NO CONSEQUENTIAL OR INDIRECT LOSSES**

- 103.1. The liability of the SPD and Procurer shall be limited to that explicitly provided in this PPA. Provided that notwithstanding anything contained in this PPA, under no event shall Procurer or the SPD claim from one another any indirect or consequential losses or damages.

**104. INDEPENDENT ENTITY**

- 104.1. The SPD shall be an independent entity performing its obligations pursuant to the PPA or/ and RFP.
- 104.2. Subject to the provisions of the PPA or/ and RFP, the SPD shall be solely responsible for the manner in which its obligations under this PPA or/ and RFP are to be performed. All employees and representatives of the SPD or contractors engaged by the SPD in connection with the performance of the PPA or/ and RFP shall be under the complete control of the SPD and shall not be deemed to be employees, representatives, contractors of Procurer and nothing contained in the PPA or/ and RFP or in any PPA or contract awarded by the SPD shall be construed to create any contractual relationship between any such employees, representatives or contractors and Procurer.

**105. TAXES AND DUTIES**

- 105.1. The SPD shall bear and promptly pay all statutory taxes, duties, levies and cess, assessed/ levied on the SPD, contractors or their employees, which are required to be paid by the SPD as per the Law in relation to the execution of the PPA or/ and RFP and for generation/ supply/ sale of solar energy as per the terms of this PPA or/ and RFP.
- 105.2. Procurer shall be indemnified and held harmless by the SPD against any claims that may be made against Procurer in relation to the matters set out in Article 105.1. Procurer shall not be liable for any payment of, taxes, duties, levies, cess whatsoever for discharging



any obligation of the SPD by Procurer on behalf of SPD.

- 105.3. The financial bid should include all taxes and duties etc., if any. SPD shall be entirely responsible for all taxes, duties, license fees, etc. However, if any new change in tax/duty and cess is effected in the period after the Bid Deadline as per the RFP and any time during the period of Agreement, the same will be passed on by the SPD to the Procurer as determined by the Nodal Agency/ Competent Authority.

## **106. COMPLIANCE WITH LAW**

- 106.1. Despite anything contained in this PPA but without prejudice to this Article, if any provision of this PPA shall be in deviation or inconsistent with or repugnant to the provisions contained in the Electricity Act, 2003, or any rules and regulations made there under, such provision of this PPA shall be deemed to be amended to the extent required to bring it into compliance with the aforesaid relevant provisions as amended from time to time.

## **107. LEASING OF PROJECT OR UNIT(S) THEREOF**

- 107.1. Procurer may Lease out Project or Unit(s) of it to a Leasee following due process. In such eventualities, below mentioned shall be applicable:
- a) A back to back contractual arrangement would be made between Leasee and SPD to give effect to terms and conditions of this PPA as relevant for the Project or concerned Unit(s). Such contractual arrangement would provide that, among others, applicability of Articles 34 to 43 of this PPA would be between SPD and Leasee i.e. tariff, payments and settlement, among others, would be transacted directly between Leasee, not Procurer, and SPD.
  - b) Above said contractual arrangement between Leasee and SPD would be a part of **Lease Agreement** between Leasee and Procurer.
  - c) The Procurer shall ensure that terms and conditions of Lease Agreement or subsequent contractual arrangement pursuant to (a) above shall not create a position of Disadvantage for SPD when compared to those enjoyed by the SPD under this PPA.
- 107.2. Notwithstanding above, it would be responsibility of Procurer to ensure payment security of SPD through appropriate mechanism for all times.

## **108. BENCHMARK COST**

- 108.1. Unless updated before bid submission, shall mean the latest of benchmark costs as declared by MNRE for rooftop projects or capex considered by SERC in its latest tariff orders for solar project, under any of its prevalent schemes, whichever is latest available as on Bid Deadline.

IN WITNESS WHEREOF the Parties have caused the PPA to be executed through their duly authorized representatives as of the date and place set forth above.

**For and on behalf of [Procurer]**

**For and on behalf of [Solar Power Developer]**

**Name:**

**Designation: Address:**

**Name: Designation:**

**Address:**

**Signature with seal**

**Witness:**

**1.**

**2.**

**Signature with seal Witness:**

**1.**

**2.**

## **SCHEDULE 1: SCOPE OF WORK**

### **1. Details of work**

- 1.1. Designing, engineering, supply, finance, installation and Commissioning of Project as per standard design and specifications and connecting up to existing Mains/ACDB and interfacing internal electrical loads of Project with licensee's network/electrical loads with O&M for period of twenty five (25) Contract Years for Sale of Solar Power to the Procurer. SPD would have to take approval for the interfacing the Project with Grid/Electrical Loads of every location from DISCOM/ CEIG, applicable. O&M for twenty-five (25) Contract Year shall be required for each of the Project.
- 1.2. SPD shall be responsible for all the works related to Commissioning and O&M for twenty-five (25) Contract Years of Project. In no case, Procurer or Nodal Agency shall be responsible to pay or bear an increase in tariff for any work related to Project except for the cases (i) where PPA requires additional payment towards additional work related to Commissioning of Project but not in the scope of SPD (ii) in case of Change in Law events and (iii) where there is a change in configuration of the project from the Standard Mounting Configuration to a mix of various Mounting Structure Configurations as described in Cl 6 hereunder.
- 1.3. It is clarified that the Project awarded would not include energy storage with rooftop solar project. However, if Procurer desires to have such arrangement, it would need to pay separately for the battery storage, and associated change in design and civil and electrical works. Such arrangement would not affect the tariff discovered for sale of power.

### **2. The scope of work shall also include the following:**

- 2.1. A layout plan of the site should be submitted to the Inspecting Authority, appointed by the Nodal Agency clearly indicating the identified location for installation of SPV modules & control room, where control panels shall be installed;
- 2.2. Detailed planning of time bound smooth execution of Project;
- 2.3. System Acceptance Testing for the successful Commissioning of the Project;
- 2.4. O&M of the Project for twenty-five (25) Contract Year to assure faultless operation, and inventory maintenance; Supply of Power from Commissioning to Termination or for twenty-five (25) Contract Years, whichever is later;
- 2.5. Coverage of risk liability of all personnel associated with implementation and realization of the Project;
- 2.6. The SPD shall maintain sufficient inventory of the spare parts to ensure that the Project is functional during the term of PPA;
- 2.7. The SPD is responsible for the waterproofing of the roof disturbed/ pierced for installation of Project for the O&M period of first three (3) Contract Years. The SPD should immediately take necessary action to repair any damage to the water proofing.

However, in such situations, SPD shall bear any loss or damage to Project and rectify the same within reasonable timeframe but any generation loss in such eventualities shall not be passed on to Procurer. If SPD fails to do required water proofing within seven (7) Days from the day of identification of issue, Procurer may get the same done at prevailing market rate and SPD shall reimburse the same to Procurer. If the SPD fails to reimburse the expenses to the Procurer, then such expenses shall be adjusted by the Procurer from the Monthly Bills of the subsequent Months.

- 2.8. SPD shall be responsible for O&M of the Project from COD, till the completion of twenty-five (25) Contract Years. Installation of the Project as Type 1 (Solar Rooftop Project with less than equal to one (1) meter elevation of smaller leg of mounting structure (Standard Mounting Configuration)

### **3. Internal electrification:**

- 3.1. Inspection of the existing electrical network of each of the Project;
2. Inspection of the Project in respect of its interfacing with licensee network/identified electrical load;
  3. Preparation and submission of electrical drawing for the site with quantity of material required;
  4. Obtaining prior approval of the work and drawing from Inspecting Authority, appointed by the Nodal Agency;
  5. Execution of the work in accordance with the norms and regulation directives for Commissioning of the Project to the satisfaction of the Nodal Agency and the Procurer;

### **4. Grid connection:**

- 4.1. The SPD shall be responsible for synchronization of the Project with licensee's network under the relevant regulations and Madhya Pradesh Policy for Decentralized Renewable Energy Systems, 2016 as amended from time to time.
- 4.2. Connectivity of Project with the licensee's network;
- 4.3. Commissioning of the Project as applicable.

### **5. Metering and grid connectivity:**

- 5.1. Metering and grid connectivity of the Project would be the responsibility of the SPD in accordance with the prevailing guidelines of the concerned DISCOM and / or CEA and net metering provisions in the state of MP. Nodal Agency and Procurer may facilitate in the process; however, the entire responsibility lies only with the SPD. The cost of required meters shall be borne by SPD. This includes purchase of net meters in case of supply through Category I under Madhya Pradesh Policy for Decentralized Renewable Energy System, 2016.
2. In case of Category I and Category III systems, the SPD shall install the Generation Meter separately near the output of Inverter or at each Delivery Point under both the Category Project and Net-Meter shall be located in place of present DISCOM's metering system.
3. Meters and metering equipment shall be tested as per provision of MPERC and as per

IS 14697 at CPRI or at any NABL accredited lab before installation at site on the cost of SPD and should be properly sealed in the presence of designated authority from MPUVNL at the time of installation.

4. The accuracy class, current rating and certifications of the net meter and generation meter shall confirm with the standards for net meter and standards for generation meter under the concerned Regulations/ Rules/ Policy including Madhya Pradesh Policy for Decentralized Renewable Energy System, 2016 and any subsequent amendment.

## 6. Mounting Structure:

In case the SPD desires to do the full capacity of the Project as per the Standard Mounting Configuration (Type 1) defined below in the Mounting Structure Configurations table, then SPD should bear the associated cost of civil and electrical infrastructure.

However, in case where SPD has assessed that PPA Capacity based on Type 1 configuration alone is not feasible on the roof of the Procurer's premises, then the SPD is allowed to propose a mix of configuration. In such cases, SPD may be required to change the PPA Capacity or modify the configuration of the Project based on the availability of rooftop, ground, parking lot or places where elevated structure is required in the premise of the procurer. Hence, there are multiple arrangements in which a Project could be Commissioned having PPA capacity deployed as a mix of various configurations as provided in the Mounting Structure Configurations table. In such cases, the revised Tariff of the PPA for the Project shall be determined on the basis of the following formula:

Revised Tariff = L1 Tariff x (1 + Increment factor) {rounded off to three decimal places}

Increment factor = (% of PPA Capacity as T1 x 0%) + (% of PPA Capacity as T2 x 4.87%) + (% of capacity as T3 x 1.68%) + (% of capacity as T4 x 6.38%)

Solar Rooftop Project with less than equal <b>to one (1) meter</b> elevation of smaller leg of mounting structure	Type 1 (T1)
Solar Rooftop Project with structure having elevation more <b>than one (1) meter and less than three (3) meter</b> elevation	Type 2 (T2)
Solar Ground Mounted Project within the premises with <b>less than equal to one (1) meter elevation</b> of smaller leg of	Type 3 (T3)
Solar Ground Mounted Project within the premises with more <b>than one (1) meter and less than three (3) meter elevation</b> of	Type 4 (T4)

Illustration:

Project is configured in the following fashion: T1 – 35%, T2 – 22%, T3 – 16% & T4 –

27%

Increment Factor =  $35\% \times 0\% + 22\% \times 4.87\% + 16\% \times 1.68\% + 27\% \times 6.38\% = 3.0628\%$

Say the discovered L1 tariff is INR 3.515,

Revised Tariff would be =  $3.515 \times (1 + 3.0628\%) = \text{INR } 3.623$  (Revised Tariff shall be rounded off to three decimal places)

## **7. Insurance:**

The SPD shall also take insurance for third party liability covering loss of human life, engineers and workmen and also covering the risks of damage, theft of material/ equipment/ properties after completion of the work(s). Before commencement of the work, the SPD shall ensure that all its employees and representatives are covered by suitable insurance against any damage, loss, injury or death arising out of the execution of the work. Liquidation, Death, Bankruptcy etc., shall be the responsibility of SPD.

## **8. Warranty and guarantees:**

- 8.1. The SPD shall warrant that the goods supplied under this Agreement are new, unused, of the most recent or latest technology and incorporate all recent improvements in design and materials as per standards specified in the technical specifications of this RFP. The SPD shall provide warranty covering the rectification of any and all defects in the design of equipment, materials and workmanship including spare parts for a period of twenty-five (25) Contract Years.
- 8.2. The responsibility of operation of warranty and guarantee clauses and claims/ settlement of issues arising out of said clauses shall be responsibility of the SPD and Nodal Agency will not be responsible in any way for any claims whatsoever on account of the above.

## **9. Type and quality of materials and workmanship:**

- 9.1. The design, engineering, manufacture, supply, installation, commissioning and performance of the equipment shall be in accordance with latest/ appropriate IEC/Indian Standards as detailed in the technical specifications of this RFP or its subsequent amendments. Where appropriate Indian Standards and Codes are not available, other suitable standards and codes as approved by the MNRE/ CEA/ electricity regulators/ Nodal Agency shall be used. All the relevant test certifications must be kept valid up to one (1) Year from the COD of the Project.
- 9.2. The specifications of the components should meet the technical specifications mentioned in this PPA.
- 9.3. Any supplies which have not been specifically mentioned in this PPA but which are necessary during construction and/or O&M period of the Project shall be provided by the SPD without any extra cost and within the time schedule for efficient and smooth construction and O&M of the Project.

## **10. Construction of control room etc.**

Construction of control room or any other relative civil work essential for Commissioning of Project;

## **11. Additional works**

1. Additional civil, structural or electrical works which are so required/desired to be undertaken by the Procurer for the Project and which are not covered in the scope of work, shall be done by the SPD after obtaining concurrence of the Procurer on its design, drawing and estimate cost of such additional works shall be computed on the basis of SOR of Government agencies including PWD for Civil and DISCOM for Electrical. Cost of additional works shall be decided mutually between SPD and Procurer but in any case it should not exceed the SOR rates. A copy of actual cost and the SOR rates assessed for additional work shall be submitted to MPUVNL for approval. Additional works may include but not limited to;
2. Laying of additional length of cable and accessories if the complete space/rooftop provided is more than 500 meters away from the DISCOM metering point.
3. Requirement of additional/specific design of structure, as desired by Procurer in deviation with the design provided by the SPD, to accommodate solar panels on rooftop, ground or on any existing structure/ construction/body.
4. Construction of approach to the rooftop/place of installation.
5. Unless otherwise agreed between the Parties, the SPD shall not do (a) chipping of rooftop; or (b) disturb water proofing of roof (c) carry out any other modification of the Premises without the written consent of the Procurer. One-time cost for strengthening of Premise to the extent required for setting up Solar PV Project during construction shall be borne by Procurer. In case of any ambiguity, SPD and Procurer shall involve Nodal Agency to get the clarity on the roof strengthening works. Cost of repair or maintenance of Premise to the extent required for the Solar PV Project, during the O&M of Project, shall be the responsibility of SPD, other than cost required for water proofing. The cost for water proofing will be the responsibility of SPD for a period of first three (3) Contract Years.
6. In case of any ambiguity over any specific works, SPD and Procurer shall involve Nodal Agency to get the clarity on the additional works.

## **12. Provision of sign board**

SPD will have to provide sign board of dimension 8'x4' (M.S. sheet size 4'x3' of 16 gauge, M.S. angle 40x40x5 mm with essential bracing & adequate grouting with PCC 1:3:6 i/c painting & writing) at each site with complete specification & matter will be provided to the SPD with PPA.

## **13. Commissioning**

1. Commissioning would be as per Article 29 of PPA.
2. Procurer may purchase power produced after the Commissioning at Tariff as applicable according to the tariff schedule of the PPA, on the condition that SPD shall follow all laws and regulation while providing solar power.

## **SCHEDULE 2: TECHNICAL SPECIFICATIONS**

The proposed Project shall be completed as per the technical specifications given below.

The SPD are hereby advised to take a note of the draft guidelines issued by MNRE dated 09- 08- 2016 or any amendments thereof in respect of minimum technical requirements, quality standards, best practices and specifications for grid connected roof top PV systems in addition to technical parameters mentioned in this RFP and comply accordingly.

### **1. Parameters**

A Project consists of SPV array, Module Mounting Structure, Power Conditioning Unit (PCU) consisting of Maximum Power Point Tracker (MPPT), charge controller (if required), Inverter, Controls & Protections, interconnect cables and switches. PV Array should be mounted on a suitable structure. Project should be designed with necessary features to synchronize with the grid power. Components and parts used in the Project including the PV modules, metallic structures, cables, junction box, switches, PCUs etc., should conform to the BIS or IEC or international specifications, wherever such specifications are available and applicable.

#### **1. PROJECT SHALL CONSIST OF FOLLOWING EQUIPMENT/ COMPONENTS:**

##### **1.1. Solar Photovoltaic Modules**

- 1.1.1. The PV modules used should be made in India and must qualify to the latest edition of IEC PV module qualification test or equivalent BIS standards Crystalline Silicon Solar Cell Modules IEC 61215/IS14286. In addition, the modules must conform to IEC 61730 Part 1- requirements for construction & Part 2 – requirements for testing, for safety qualification or equivalent IS.
- 1.1.2. For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC 61701/IS 61701. The total solar PV array capacity should not be less than allocated capacity kW) and should comprise of solar crystalline modules of minimum 250 Wp and above wattage. Module capacity less than minimum 250 Wp should not be accepted.
- 1.1.3. Protective devices against surges at the PV module shall be provided. Low voltage drop bypass diodes shall be provided.
- 1.1.4. PV modules must be tested and approved by one of the IEC authorized test centers. The module frame shall be made of corrosion resistant materials, having Pre-galvanized/ anodized Aluminum or superior material (after approval from MNRE)
- 1.1.5. The SPD shall carefully design & accommodate requisite numbers of the modules to achieve the rated power in his Bid.
- 1.1.6. Other general requirement for the PV modules and subsystems shall be the following:
  - a) The rated output power of any supplied module shall have tolerance of +/- 3%.
  - b) The peak-power point voltage and the peak-power point current of any supplied module and/or any module string (series connected modules) shall not vary by more than 2 (two) per cent from the respective arithmetic means for all modules and/or for all module strings, as the case may be.
  - c) The module shall be provided with a junction box with either provision of external screw terminal connection or sealed type and with arrangement for provision of by-



pass diode. The box shall have hinged, weather-proof lid with captive screws and cable gland entry points or may be of sealed type and IP- 65 rated.

1.1.7. Modules deployed must use a RF identification tag. The following information must be mentioned in the RFID used on each module (This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions).

- a) Name of the manufacturer of the PV module
- b) Name of the manufacturer of Solar Cells.
- c) Month & year of the manufacture (separate for solar cells and modules)
- d) Country of origin (for solar cells)
- e) I-V curve for the module Wattage,  $I_m$ ,  $V_m$  and FF for the module
- f) Unique Serial No and Model No of the module
- g) Date and year of obtaining IEC PV module qualification certificate.
- h) Name of the test lab issuing IEC certificate.
- i) Other relevant information on traceability of solar cells and module as per ISO 9001 and ISO 14001

1.1.8. **Warranties**

a. Material Warranty

Material Warranty is defined as:

The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a Period as specified in MNRE guidelines from the date of COD.

Defects and/or failures due to manufacturing Defects

and/or failures due to quality of materials

Non-conformity to specifications due to faulty manufacturing and/or inspection processes. If the solar Module(s) fails to conform to this warranty, the manufacturer will replace the solar module(s)

b. Performance Warranty

The predicted electrical degradation of power generated not exceeding 20% of the minimum rated power over the twenty-five (25) Year period and not more than 10% at the end of tenth ( $10^{th}$ ) Year of the full rated original output.

1.2. **Array Structure**

1.2.1. Hot dip galvanized MS/ Pre-galvanized/ Anodized Aluminium or superior material (after approval from MNRE) mounting structures may be used for mounting the modules/ panels/arrays. Each structure should have angle of inclination as per the site conditions to take maximum insulation. However, to accommodate more capacity the angle inclination may be reduced until the Project meets the specified performance ratio requirements.

1.2.2. The Mounting structure shall be so designed to withstand the speed for the wind zone of the location where a Project is proposed to be installed (for minimum wind

speed of 150 km/hour). Suitable fastening arrangement that do not require drilling in rooftops should be adopted to secure the installation against the specific wind speed.

- 1.2.3. The mounting structure steel shall be as per latest IS 2062: 1992 and galvanization of the mounting structure shall be in compliance of latest IS 4759.
- 1.2.4. Structural material shall be corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts. Aluminium structures also can be used, that can withstand the wind speed of respective wind zone. Necessary protection towards rusting need to be provided either by coating or anodization.
- 1.2.5. The fasteners used should be made up of stainless steel. The structures shall be designed to allow easy replacement of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels
- 1.2.6. Regarding civil structures the SPD need to take care of the load bearing capacity of the roof and need arrange suitable structures based on the quality of roof. The total load of the structure (when installed with PV modules) on the terrace should be less than  $60 \text{ kg/m}^2$ .
- 1.2.7. The minimum clearance of the structure from the roof level should be 300 mm.

#### **1.3. Junction Boxes (JBS) Based on System Design Requirements**

- 1.3.1. The junction boxes are to be provided in the PV array for termination of connecting cables. The J. Boxes (JBs) shall be made of GRP/FRP/Powder Coated Aluminium/cast aluminium alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JB's shall be such that input & output termination can be made through suitable cable glands.
- 1.3.2. Copper bus bars/terminal blocks housed in the junction box with suitable termination threads conforming to IP65 standard and IEC 62208 Hinged door with EPDM rubber gasket to prevent water entry. Single / double compression cable glands with provision of earthings. It should be placed at 5 feet or suitable height for ease of accessibility.
- 1.3.3. Each Junction Box shall have High quality Suitable capacity Metal Oxide Varistors (MOVs) / SPDs, suitable Reverse Blocking Diodes. The Junction Boxes shall have suitable arrangement monitoring and disconnection for each of the groups.
- 1.3.4. 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

#### **1.4. DC Distribution Board Based on System Design Requirements**

- 1.4.1. DC Distribution panel to receive the DC output from the array field.
- 1.4.2. DC DPBs shall have sheet from enclosure of dust & vermin proof conform to IP 65 protection. The bus bars are made of copper of desired size. Suitable capacity MCBs/MCCB shall be provided for controlling the DC power output to the PCU along with necessary surge arrestors.

#### **1.5. AC Distribution Panel Board**

- 1.5.1. AC Distribution Panel Board (DPB) shall control the AC power from PCU/ inverter and should have necessary surge arrestors. Interconnection from ACDB to mains at LT Bus bar while in grid tied mode.
- 1.5.2. All switches and the circuit breakers, connectors should conform to IEC 60947, part I, II and III/ IS60947 part I, II and III.
- 1.5.3. The changeover switches, cabling work should be undertaken by the SPD as part of the project.
- 1.5.4. All the Panel's shall be metal clad, totally enclosed, rigid, floor mounted, air - insulated, cubical type suitable for operation on three phase / single phase, 415 or 230 volts, 50 Hz.
- 1.5.5. The panels shall be designed for minimum expected ambient temperature of 45 degree Celsius, 80 percent humidity and dusty weather.
- 1.5.6. All indoor panels will have protection of IP54 or better. All outdoor panels will have protection of IP65 or better.
- 1.5.7. Should conform to Indian Electricity Act and rules (till last amendment).
- 1.5.8. All the 415 AC or 230 volts devices / equipment like bus support insulators, circuit breakers, SPDs, VTs etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions:-

Variation in supply voltage	+/- 10 %
Variation in supply frequency	+/- 3 Hz

**1.5.9. PCU/Array Size Ratio**

- a) The combined DC wattage of all inverters should not be less than rated capacity of Project under STC.
- b) Maximum power point tracker shall be integrated in the PCU/inverter to maximize energy drawn from the array.

**1.5.10. PCU/ Inverter**

- a) As SPV array produce direct current electricity, it is necessary to convert this direct current into alternating current and adjust the voltage levels to match the grid voltage. Conversion shall be achieved using an electronic Inverter and the associated control and protection devices. All these components of the Project are termed the "Power Conditioning Unit (PCU)". In addition, the PCU shall also house MPPT (Maximum Power Point Tracker), an interface between Solar PV array & the Inverter, to the PCU/inverter should also be DG set interactive. The PCU should also have provision of charge controller in case of systems. If necessary. Inverter output should be compatible with the grid frequency. Typical technical features of the inverter shall be as follows:
  - Switching devices: IGBT/MOSFET
  - Control Microprocessor /DSP

- Nominal AC output voltage and frequency: 415V, 3 Phase, 50 Hz (In case single phase inverters are offered, suitable arrangement for balancing the phases must be made.)
  - Output frequency: 50 Hz
  - Grid Frequency Synchronization range: + 3 Hz or more
  - Ambient temperature considered: -20° C to 50° C
  - Humidity: 95 % Non-condensing
  - Protection of Enclosure: IP-20(Minimum) for indoor: IP-65(Minimum) for outdoor.
  - Grid Frequency Tolerance range: + 3 or more
  - Grid Voltage tolerance: - 20% & + 15 %
  - Inverter efficiency(minimum): >98% (In case of 10kW or above)
  - Inverter efficiency (minimum): > 93% (In case of less than 10 kW)
  - THD: < 3%
  - PF: > 0.9
- b) Three phase PCU/ inverter shall be used as required.
- c) PCU/inverter shall be capable of complete automatic operation including wake-up, synchronization & shutdown.
- d) The output of power factor of PCU inverter is suitable for all voltage ranges or sink of reactive power; inverter should have internal protection arrangement against any sustainable fault in feeder line and against the lightning on feeder.
- e) Built-in meter and data logger to monitor Project performance retrievable through external computer shall be provided.
- f) The power conditioning units/inverters should comply with applicable IEC/ equivalent BIS standard for efficiency measurements and environmental tests as per standard codes IEC 61683/IS 61683 and IEC 60068- 2(1,2,14,30)/Equivalent BIS Std.
- g) The 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(for outdoor)/ IP 54 (indoor) and as per IEC 529 specifications.
- h) The PCU/ inverters should be tested from the MNRE approved test centres/NABL/BIS/IEC accredited testing-calibration laboratories. In case of imported power conditioning units, these should be approved by international test houses.

#### **1.6. Integration of PV Power with Grid**

1.6.1. For better grid interaction and functioning of Project, the following arrangement shall be ensured by SPD:

- a) Project should have appropriate instruments installed at solar panel output, inverter and load to facilitate minute-wise recording and storage of monthly data (voltage,

current, generation, consumption and grid injection) for twelve (12) Months of energy flow at various nodes.

- b) In case of network failure, or low or high voltage, Project shall go under islanding mode but not be out of synchronization so far as its operation with connected load is concerned. The supply from Project to the load points would be resumed, once the DG set comes into service, Project shall again be synchronised with DG supply and load requirement would be met to the extent of availability of power. 4 pole isolation of inverter output with respect to the grid/ DG power connection need to be provided.
- c) The Project commissioned under the Madhya Pradesh Policy for Decentralised Renewable Energy Systems, 2016 as amended from time to time, shall be provided with reverse protection relays in order to prevent reverse flow of active power into the Grid. The relay and devices used for such arrangement shall be of relevant standards.

#### **1.7. Data Acquisition System / Project Monitoring**

- 1.7.1. Data Acquisition System shall be provided for each of the solar PV Project.
- 1.7.2. Data Logging Provision for Project control and monitoring, time and date stamped system data logs for analysis computer for data monitoring, metering and instrumentation for display of systems parameters and status indication to be provided. The time integration period of data will be maximum of 15 minutes.
- 1.7.3. The following parameters should be accessible via the operating interface display in real time separately for Project:
  - a) AC Voltage
  - b) AC Output current.
  - c) Output Power
  - d) Power factor
  - e) DC Input Voltage
  - f) DC Input Current
  - g) Time Active
  - h) Time disabled
  - i) Time Idle
  - j) Power produced
  - k) Protective function limits (Viz-AC Over voltage, AC Under voltage, Over frequency, Under frequency ground fault, PV starting voltage, PV stopping voltage).
- 1.7.4. All major parameters available on the digital bus and logging facility for energy auditing through the internal microprocessor and read on the digital front panel at any time) and logging facility (the current values, previous values for up to a Year and the average values) should be made available for energy auditing through the internal microprocessor and should be read on the digital front panel.
- 1.7.5. String and array DC Voltage, Current and Power, Inverter AC output voltage and current (All 3 phases and lines), AC power (Active, Reactive and Apparent), Power

Factor and AC energy (All 3 phases and cumulative) and frequency shall be monitored.

1.7.6. The data shall be recorded in a common work sheet chronologically date wise. The data file shall be MS Excel compatible. The data shall be represented in both tabular and graphical form.

1.7.7. All instantaneous data should be available through RMS.

1.7.8. Software shall be provided for USB download and analysis of DC and AC parametric data for individual Project.

1.7.9. Provision for Internet monitoring and download of data shall be necessarily incorporated for project.

1.7.10. Remote Monitoring and data acquisition through Remote Monitoring System software with latest software/hardware configuration and service connectivity

for online / real time data monitoring/control complete to be supplied and O&M/control to be ensured by the supplier. Provision for interfacing these data on Nodal Agency server and portal in future shall be kept.

#### **1.8. Transformer “If Required” & Metering**

1.8.1. Dry/oil type appropriate kVA, of transformer Step up along with all protections, switchgears, Vacuum circuit breakers, cables etc. along with required civil work.

1.8.2. The SPD must take approval/NOC from the concerned DISCOM for the connectivity, technical feasibility, and synchronization of Project with DISCOM network and submit the same to Nodal Agency before Commissioning Project.

1.8.3. Reverse power relay shall be provided by SPD (if necessary), as per the local DISCOM's requirement.

#### **1.9. Power Consumption**

1.9.1. Regarding the generated power consumption, priority needs to be given for internal consumption first and thereafter any excess power can be exported to the DISCOM network.

#### **1.1.10. Protections**

1. The Project should be provided with all necessary protections like earthing, Lightning, and grid islanding as follows:

##### **2. Lightning Protection**

a) The SPV power Project shall be provided with lightning & overvoltage protection of appropriate size. The main aim in this protection shall be to reduce the over voltage 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. The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors. Lightning protection should be provided as per IEC 62305 standard. The protection against induced highvoltages shall be provided by the use of metal oxide varistors (MOVs) and suitable earthing such that induced transients find an alternate route to earth.

3. **Surge Protection**

- a) Internal surge protection shall consist of three MOV type surge-arrestors connected from +ve and –ve terminals to earth (via Y arrangement).

4. **Earthing Protection**

- a) Each array structure of the PV yard should be grounded/ earthed properly as per IS:3043-1987. In addition, the lightning arrester/masts should also be earthed inside the array field.

Earth resistance shall not be more than 5 ohms. It shall be ensured that all the earthing points are bonded together to make them at the same potential.

11. **Grid Islanding**

- 11.1. 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 Project 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.

- 11.2. A manual disconnects 4pole 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.

1.1.12. **Cables**

- 1. Cables of appropriate size to be used in the Project shall have the following characteristics:
  - a) Shall meet IEC 60227/IS 694, IEC 60502/IS1554 standards
  - b) Temp. Range: –10oC to +80oC.
  - c) Voltage rating 660/1000V
  - d) Excellent resistance to heat, cold, water, oil, abrasion, UV radiation
  - e) Flexible
  - f) Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop (power loss) of the entire Project to the minimum. The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use.
  - g) Cable Routing/ Marking: All cable/wires are to be routed in a GI cable tray and suitably tagged and marked with proper manner by good quality ferule or by other means so that the cable easily identified.
  - h) The Cable should be so selected that it should be compatible up to the life of the solar PV panels i.e. twenty-five (25) Contract Years.
  - i) The ratings given are approximately, SPD to indicate size and length as per system design requirement. All the cables required for the Project provided by the SPD. All cable schedules/layout drawings approved prior to installation.

- j) Multi Strand, Annealed high conductivity copper/aluminum conductor PVC type 'A' pressure extruded insulation or XLPE insulation. Overall PVC/XLPE insulation for UV protection Armored cable for underground laying. All cable trays including covers to be provided. All cables conform to latest edition of IEC/ equivalent BIS Standards as specified below: BOS item / component  
Standard Description Standard Number Cables General Test and Measuring Methods, PVC/XLPE insulated

cables for working Voltage up to and including 1100 V ,UV resistant for outdoor installation IS /IEC 69947.

- k) The size of each type of DC cable selected shall be based on minimum voltage drop.
- l) 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%.
- m) All such external electrical works shall be required to be done as per DISCOMs SOR.
- n) All cables upto main ACDB panel should be of Copper and beyond which can be of Copper/Aluminium cables.

#### **1.1.13.Connectivity**

1.1.13.1.The maximum capacity for interconnection with the grid at a specific voltage level shall be as specified in the Distribution Code/Supply Code of the State and amended from time to time. Following criteria have to be followed for selection of voltage level in the DISCOM's network for ready reference of the solar suppliers. The work should be done in compliance with respective regulations and policy.

#### **14. Tools & Tackles and Spares**

- 14.1. The requirement of maintaining tools, tackles and spares at site or at service center is left to the discretion of the SPD with a condition that the same would be made available immediately as and when required.
- 14.2. The SPD are advice to ensure a response time of 24 hours and maximum expected turnaround time of 72 hours (under special circumstances, additional time limit may be considered).
- 14.3. Minimum requisite spares to be maintained by the SPD, in case of PCU/inverter comprising of a set of control logic cards, IGBT driver cards etc. Junction Boxes, fuses, MOVs / arrestors, MCCBs etc. along with spare set of PV modules be indicated, shall be maintained at site or at nearest service centre for the entire period of O&M.

#### **15. Danger Boards and Signage**

- 15.1. Danger boards should be provided as and where necessary as per IE Act. /IE rules as amended up to date.

#### **16. Fire Extinguishers**

- 16.1. The firefighting system for the proposed Project for fire protection shall consist of portable fire extinguishers in the control room for fire caused by electrical short circuits. The installation of Fire Extinguishers should confirm to TAC regulations and BIS standards. The fire extinguishers shall be provided in the control room housing PCUs.



**17. Drawings and Manuals**

- 17.1. Two sets of Engineering, electrical drawings and Installation and O&M manuals are to be supplied. SPD shall provide complete technical data sheets  
for each equipment giving details of the specifications along with make/makes in their bid with basic design of the Project and power evacuation, synchronization as also protection equipment.
- 17.2. Approved ISI and reputed makes for equipment be used.
- 17.3. For complete electro-mechanical works, SPD shall supply complete design, details and drawings to Nodal Agency.

**18. Planning and Designing**

- 18.1. The SPD should carry out Shadow Analysis at the site and accordingly design strings & arrays layout considering optimal usage of space, material and labour. The SPD should submit the array layout drawings along with Shadow Analysis Report to the designated authority of Nodal Agency.
- 18.2. Nodal Agency reserves the right to modify the landscaping design, Layout and specification of sub-systems and components at any stage as per local site conditions/requirements.
- 18.3. The SPD shall submit preliminary drawing for approval & based on any modification or recommendation, if any. The SPD shall submit one sets and soft copy in CD of final drawing for formal approval to proceed with construction work.

**19. Safety Measures**

- 19.1. The SPD shall take entire responsibility for electrical safety of the installation(s) including connectivity with the grid and follow all the safety rules & regulations applicable as per Electricity Act, 2003 and CEA guidelines etc.

**SCHEDULE 3: TARIFF SCHEDULE**

<b>Sr. No.</b>	<b>Project</b>	<b>Type of Institution</b>	<b>Contract Year</b>	<b>RA L1 Tariff of the Project</b>
				Rs. _____
1.			1	

1. Tariff must be applicable for sale of Solar Power to Procurer for the First Contract Year.
2. Tariff shall be escalated by 3% at the start of each Contract Year (second Contract Year onward) till start of 15<sup>th</sup> year and that would be applicable from second year onwards;
3. The above Tariff is inclusive of any applicable taxes. However, if any new change in tax/duty is effected in the period after the Bid Deadline and any time during the period of Agreement, the same will appropriately addressed as per PPA.
4. Further, for clarification, PPA shall be signed for a Project and Tariff shall remain the same for all Unit(s) of the Project. However, it shall be applicable to respective Unit(s) as per respective dates of Unit COD and in accordance with PPA.

**SCHEDULE 4: COD SCHEDULE**

COD Schedule from the Effective Date of PPA

S. NO.	MILESTONE (ACTIVITY TO BE PERFORMED)	DAY
1.	PPA EFFECTIVE DATE	T
2.		T + [1 MONTH]
3.		T + [2 MONTH]
4.		T + [3 MONTH]
5.		T + [4 MONTH]
6.		T + [5 MONTH]
7.		T + [6 MONTH]
8.		T + [7 MONTH]
9.		T + [8 MONTH]
10.		T + [9 MONTH]
11.		T + [10 MONTH]
12.		T + [11 MONTH]
13.	SCSD	T + [12 MONTH]

## SCHEDULE 5: LETTER FROM NODAL AGENCY CONFIRMING THE CAPACITY

No. MPUVN/GCRT/RESCO-V//2022-23/-----/Group-

Date:

To,

Name of Authorized Signatory of SPD

Designation of Authorized Signatory of SPD

Address of SPD

Sub: Approval for Capacity assessed by you after having performed survey of .....

Ref:

1. With reference to above, your offer for deployment of solar rooftop Power Plants under RESCO model was found to be lowest in terms of the tariff quoted for sale of power.
2. As per concerned work order pursuant to the LOA referred above, you have undertaken survey of the all the Sites for this project and suggested us the appropriate capacity which could be deployed for this project. Accordingly based on your report, we hereby confirm the capacity of the solar rooftop Power Plants to be deployed as per the details given below:

S. N o.	Name of the Project	Capacity of the SPV System as per the PPA (in kW)	Capacity of the System after survey as per the final Mounting Structure			
			T1	T2	T3	T4

3. The capacity after undertaking the survey for this project shall accordingly replace the capacity for this project as mentioned in the PPA. This letter shall be treated as a part of the PPA. All terms and conditions shall remain same as mentioned in the RFP and PPA signed.

(By order of the Managing Director)

Authorized Signatory  
(MPUVNL)

**SCHEDULE 6:**

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**SCHEDULE 7: UNITS DETAILS**