The Mahatma Phule Renewable Energy & Infrastructure Technology Limited, (MAHAPREIT)

Invites

Request for Proposal (RFP)

For

Discovery of Tariff & Selection of Solar Power Developers Through

Tendering Process

For

Implementation of 500MW with a 50% 'GREENSHOE' Option, for Grid Connected Roof Top Solar PV Systems under RESCO Model at various locations in the State of Maharashtra, Goa, Gujarat, Uttar Pradesh and Andhra Pradesh

RFP No: MAHAPREIT/RESCO/02/2025-26

Date: 29/05/2025

Issued by: -

The Mahatma Phule Renewable Energy & Infrastructure Technology Limited, (MAHAPREIT)

B-501 Pinnacle Corporate Park, Next to Trade Center, BKC, Bandra (East), Mumbai – 400051

Website: https://mahapreit.in

MAHATMA PHULE RENEWABLE ENERGY & INFRASTRUCTURE TECHNOLOGY LIMITED
Subsidiary of MPBCDC (Gov. of MH Undertaking)

RFP No: MAHAPREIT/RESCO/02/2025-26 Dated: 29/05/2025

The Mahatma Phule Renewable Energy & Infrastructure Technology Limited, invites Bids from the Bidders to participate through this "Request for Proposal (RFP) for Tariff Discovery and Selection of Solar Power Developers for Implementation of an Aggregate Capacity of 500 MW, with a 50% 'GREENSHOE' Option, for Grid-Connected Rooftop Solar PV Projects under the RESCO Model, for Sale of Solar Power at Various MSME Units in the States of Maharashtra, Goa, Gujarat, Uttar Pradesh, and Andhra Pradesh"

For the implementation of above-mentioned work, Bidders should submit their bid proposal along with non-refundable Tender fees and all requisite documents complete in all respects on or before 15/07/2025 up to 16:00 Hours in the office of MAHAPREIT in prescribed format. Bid proposals received without the prescribed Tender fees and Bid Security shall be rejected. In the event of any date indicated above is a declared Holiday, the next working day shall become operative for the respective purpose mentioned herein. Technical Bid will be opened on 16/07/2025 at 15:00 Hours in the presence of authorized representatives of Bidders who wish to be present.

Bid documents which include eligibility criteria, technical specifications, various conditions of Agreement, formats, etc. can be viewed and can be downloaded from https://www.mahatenders.gov.in/ for online submission.

DISCLAIMER

1. Though adequate care has been taken while preparing this RFP document (inclusive of Formats and Annexures), the Bidders shall satisfy themselves that the document is complete in all respects. Intimation of any discrepancy shall be given to this office immediately. If no intimation is received from prospective Bidder at least ten (10) days prior to Bid Submission deadline, whichever is later it shall be considered that the RFP document is complete in all respects and has been received by the Bidder. Bidder shall be responsible to read all clauses in conjunction with PPA (Part of RFP, in the form of Annexure).

2. MAHAPREIT reserves the right to modify, amend or supplement RFP documents including all formats and annexures at any time before Bid Submission deadline. Interested Bidders are advised to follow and keep track of MAHAPREIT's website for updated information. MAHAPREIT is not obligated to send/ communicate separate notifications for such notices/ amendments/ clarification etc. in the print media or individually. MAHAPREIT shall not be responsible and accountable for any consequences to any party.

3. While this RFP has been prepared in good faith, neither MAHAPREIT nor their employees or advisors make any representation or warranty, expressed or implied, or accept any responsibility or liability, whatsoever, in respect of any statement or omissions herein, or the accuracy, completeness or reliability of information and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this RFP, even if any loss or damage is caused by any act or omission on their part.

4. The capitalized term or any other terms used in this RFP, unless as defined in RFP or repugnant to the context, shall have the same meaning as assigned to them by the Electricity Act, 2003 or Company Act, 1956/2013 or Indian Partnership Act, 1932 or Limited Liability Partnership Act, 2008 or Income Tax Act, 1961 and the rules or regulations framed under these Acts.

BID INFORMATION SHEET

Document Description	"Request for Proposal (RFP) for Tariff Discovery and Selection of Solar Power Developers for Implementation of an Aggregate Capacity of 500 MW, with a 50% 'GREENSHOE' Option, for Grid-Connected Rooftop Solar PV Projects under the RESCO Model, for Sale of Solar Power at Various MSME Units in the States of Maharashtra, Goa, Gujarat, Uttar Pradesh, and Andhra Pradesh"
RFP No. & Date	RFP No: MAHAPREIT/RESCO/02/2025-26 Dated: 29/05/2025
RFP Purchase Start Date	29/05/2025 at 18:00 Hours
RFP Purchase End Date	15/07/2025 at 11:00 Hours
Broad Scope	Design, Engineering, Supply, Financing, Installation, Testing and Commissioning along with Comprehensive Operation & Maintenance for twenty (20) Operational Years of Grid Connected Roof Top Solar PV Projects of aggregate capacity of **five hundred (500) MW** with a 50% 'GREENSHOE' Option, for sale of Solar Power under RESCO Model, at various MSMEs in the state of Maharashtra, Goa and Gujarat, Uttar Pradesh and Andhra Pradesh, India.
Pre-bid Meeting	The pre-bid meeting shall be held on **30/06/2025** at 15:00 hours. The Bidders shall nominate a maximum of 2 representatives and share the following participation details at cgm.reem@mahapreit.in / cgm.resco@mahapreit.in / cgm.it@mahapreit.in • Name of the Bidder • Name, Email, Contact No. of the Participant(s) Pre-bid meeting shall be hosted ONLINE by MAHAPREIT office, Mumbai.
Last date & Time of Bid Submission	15/07/2025 at 16:00 Hours
Submission of mandatory hard copies (Technical bid)	15/07/2025 at 17:00 Hours

Bid Opening (Technical)	16/07/2025 at 15:00 Hours

Bid Opening (Financial)	Will be intimated later through e-procurement portal and MAHAPREIT website.
Tender fees (non-refundable)	INR 10,000.00 (Ten Thousand only) + 18% GST. Bidders can pay for the cost of documents in only on MAHATENDER web portal.
Bid Security	Interested Bidder shall furnish Bid Security of required amount for each Project category for which Bidder is placing Bid. Bidders placing Bid for more than one Project category could furnish single Bid Security of value equivalent to the sum of the Bid Securities required for each Project categories in which Bidder is participating. The Bid Security as defined under clause 4.13 "Project category wise Bid Security to be submitted by the Bidder(s)" of RFP document, shall be paid online at https://www.mahapreit.in and https://www.mahatenders.gov.in/ websites. Alternatively, for convenience of Bidders and avoid any exigency for Bidders, required Bid Security may be submitted to MAHAPREIT in the form of: a. Crossed Demand Draft drawn in favour of "MAHAPREIT" payable at Mumbai from a nationalized/ scheduled bank, or b. FDR in favour of MAHAPREIT, Mumbai through A/C of bidder or bank guarantee as per prescribed FORMAT 4. However, these options shall be utilized only when Bidder faces problem with online portal. No exemption towards Bid Security is allowed to any type of organizations/ agencies including MSMEs or any Govt./ semi Govt./ PSUs.

Bank Guarantee ("BG")	Successful Bidder shall be required to furnish a Bank Guarantee ("BG") as per the provisions of the RFP.
Update on this RFP	Bidders are advised to keep track of the changes/ updates/ corrigendum regarding this RFP on https://mahapreit.in/ and https://www.mahatenders.gov.in/ websites.
Documents to be uploaded	The PDF copies of original Documents should be uploaded on above mentioned web-site and should be produced for the verification on demand after opening of the Technical Bid.
Currency of Bids	Indian Rupees (INR)
Address for Bid submission/ correspondence	MAHAPREIT, B-501 Pinnacle Corporate Park, 5th floor, next to Trade centre, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051 MAHAPREIT Email ID: cgm.reem@mahapreit.in cfo@mahapreit.in cgm.it@mahapreit.in

B. DEFINITIONS & ABBREVIATIONS

In this "Bid / RFP Document" the following words and expression will have the meaning as herein defined where the context so admits:

1) "Affiliate" shall mean a Company / Limited Liability Partnership (LLP) Firm/ Partnership Firm/ Sole Proprietor that directly or indirectly
   a) controls, or
   b) is controlled by, or
   c) is under common control with

   a Bidder or Member of a Consortium. Any bank or financial institution shall not be considered as Affiliate;
2) "Benchmark Cost" shall mean the benchmark costs as declared by MNRE for FY 2021- 22 vide their Office Memorandum No. 32/24/2020-SPV Division, dated 27th October 2021, attached as ANNEXURE – IV: MNRE Benchmark Costs for FY 2021-22.
3) "B.I.S." shall mean specifications of Bureau of Indian Standards (BIS);
4) "Bid" shall mean the Technical and Financial Proposal submitted by the Bidder along with all documents/credentials/attachments / annexure etc., in response to this RFP, in accordance with the terms and conditions hereof;
5) "Bidder(s)" shall mean bidding Company/Limited Liability Partnership (LLP) firm/ Partnership Firm/ Sole Proprietor or Consortium in any form submitting the Bid. Any reference to the Bidder includes its successors, executors and permitted assigns as the context may require;
6) "Bidding Consortium or Consortium" shall refer to a group of bidding Company/Limited Liability Partnership (LLP) firm/ Partnership Firm/ Sole Proprietor that has collectively made a Bid in response to this RFP. Consortium of a maximum of three entities/ members is allowed under this RfP;
7) "Bid Deadline" shall mean the last date and time for submission of Bid in response to this RFP as specified in Bid Information Sheet;
8) "Bid Security or Earnest Money Deposit or EMD" shall mean Bid Security to be submitted by the Bidder along with the Bid as per clause 4.13 of this RfP;
9) "Bid Validity Period" shall mean the period starting from the bid submission date till the six (6) months from the opening of Financial Bid;
10) "CEA" shall mean Central Electricity Authority;
11) "COD" shall mean Commercial Operation Date;
12) "CERC" shall mean Central Electricity Regulatory Commission;
13) "Chartered Accountant" shall mean a person practicing in India or a firm whereof all the partners practicing in India as a Chartered Accountant(s) within the meaning of the Chartered Accountants Act, 1949;
14) "Competent Authority" shall mean Managing Director of MAHAPREIT, himself

and/or a person or group of persons nominated by him for the mentioned purpose herein;

15) "Commissioning" shall mean demonstration of successful operation of the Grid Connected Project or part thereof, in accordance with prevailing regulations and as per SCHEDULE-I Scope of Work of PPA, by the Solar Power Developer;
16) "Commercial Operation Date" or "COD" shall mean the day when full PPA Capacity of the Project shall be declared commissioned by the concerned authority as per the terms and conditions laid out in PPA;
17) "Company" shall mean a body incorporated in India under the Companies Act, 1956 or Companies Act, 2013 including any amendment thereto;
18) "Comprehensive Operation and Maintenance or "Comprehensive O&M" shall mean insurance, warranty, spare parts and operation & maintenance of Projects during the term of the PPA;
19) "Control" shall mean with respect to any Entity means not less than 51% ownership, directly or indirectly, of such Person or the power to direct the management and policies of such Person by operation of law, contract or otherwise;
20) "Day(s)" 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;
21) "Effective Date" shall means the date on which all the condition precedents under the PPA shall be accomplished by the RESCO and Procurer;
22) "Eligibility Criteria" shall mean the Eligibility Criteria as set forth in this RFP;
23) "Eligible Bidder(s)" shall mean a Bidder who is qualified as per the eligibility requirement pursuant to this RfP;
24) "Execution Date" shall mean date of signing of a Power Purchase Agreement between Solar Power Developer and the Procurer;
25) "Expiry Period" shall mean the date of expiry of the PPA, which shall not be earlier than the 20 (twenty) Operational Years from the COD, unless terminated earlier in accordance with the terms of this Agreement;
26) "Facilitation charge" shall mean payment towards administrative overheads, liaising with other state authorities, visits to the site for plant inspection and commissioning purposes to the MAHAPREIT. It shall be equal to paisa on the solar generation billed to consumer/ MSMEs for the PPA capacity;
27) "Financial Bid" shall mean online financial Bid, containing the Bidder's quoted First Year Tariff as per format given in the RFP;
28) "First Operational Year" shall mean the period commencing from the COD and expiring at the end of the Calendar Month in which Project completes twelve (12) Months from the COD;
29) "Government Authority" means one or more of the GoI, the GoMP, any local government or any other ministry, governmental department, commission, board, body, bureau, agency, authority, instrumentality, inspectorate, statutory corporation or body corporate over which the GoI or the GoMP exercises control, court or other judicial or administrative body or official or Person, having jurisdiction over the RESCO, the Unit or any portion thereof and the performance of obligations and exercise of rights of the Parties in accordance with the terms of

this Agreement;

30) “IEC” shall mean specifications of International Electrotechnical Commission;
31) “Inspecting Authority” shall mean the authority designated by the Competent Authority for the said purpose;
32) “kWp” shall mean Kilowatt Peak;
33) “kWh” shall mean Kilowatt Hour;
34) “kW” shall mean kilowatt;
35) “Lead Member” shall mean the Bidder itself if it is a single firm, or the member of a Bidder if it is a consortium of two or more firms established during the qualification process for the Project, who has been duly authorized by the other members of the consortium to submit the Proposal and act on behalf of the consortium. In such case, the member of the consortium must submit a Power of Attorney as provided at FORMAT 7: POWER OF ATTORNEY

    Further, there shall be only one Lead Member, having the shareholding of not less 51% in the Bidding Consortium;

    Note: The shareholding of the Lead member in the Project Company (Special Purpose Vehicle) cannot be changed till 01 (One) year after the Commercial Operation Date (COD) of the Project;
36) “MNRE” shall mean Ministry of New and Renewable Energy, Government of India;
37) “Month(s)” shall mean a calendar month as per the Gregorian calendar;
38) “MW” shall mean Mega Watt;
39) “MWp” shall mean Mega Watt Peak;
40) “Operational Year(s)” the First Operational Year and thereafter each period of 12 (twelve) Months till the Expiry Date of PPA;
41) “Paid-up Share Capital” means the paid-up share capital as defined in Section 2 of the Company Act, 2013;
42) “Payment Security Mechanism” shall have the same meaning as defined in the PPA
43) “Power Purchase Agreement or PPA” shall mean the agreement to be executed between RESCO and the Procurer for the supply of Solar Power to the Procurer from the Project commissioned by the RESCO. The PPA is attached as ANNEXURE - II to this RFP;
44) “PPA Capacity” shall mean the capacity as confirmed by Successful Bidder after actual survey pursuant to LOA and mentioned in the PPA for the implementation of Projects for sale of solar power to the Procurer;
45) “Premise” shall mean any land, building or structure or part thereof or combination thereof including any other vacant /non vacant area which is part of the Procurer’s establishment;
46) “Procurer(s)” shall mean the person or company or organization procuring solar power from the RESCO at competitively determined tariff under this RFP;

47) “Project(s)” shall mean the Grid Connected Solar PV Project(s);
48) “Project Capacity” means the capacity of the Projects mentioned in the PPA;
49) “Project Cost” of a Project shall mean the total cost of the project determined as a multiplication of the Project’s PPA capacity with the applicable Benchmark Cost (as per the applicable Capacity Range);
50) “Project category(s)” shall mean a Category of Project(s) as per Clause 2.2 of this RFP;
51) “Project Company” shall mean Company incorporated by the Bidder as per Indian Laws in accordance with Clause 4.5;
52) “Prudent Utility Practices” shall mean the practices, methods and standards that are generally accepted nationally 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 of the type specified in this RFP, as per requirements of Indian Law;
53) “Rate Validity Period” shall mean the period for a particular Project category starting from the date of issuance of LOA for that Project category till twelve (12) Months from the issuance date of LOA. It may be extended further for a period of three (3) Months with mutual consent between the MAHAPREIT and the Successful Bidder of a Project category;
54) “RESCO” shall mean a person or an entity, which is in the business of supplying power generated through Project installed in the Premise of the Procurer on mutually agreed terms;
55) “RESCO Model” shall mean where the Bidders intend to use a Premise owned/used by the Procurer and enters into the PPA with Procurer for supply of solar power;
56) “RFP” shall mean Request for Proposal (RFP)/ Bid document/ Tender document and shall include formats and annexures in it;
57) “Scheduled Commercial Operation Date” or “SCOD” shall mean twelve (12) Months from the Effective Date as defined in the PPA;
58) “SERC” shall mean State Electricity Regulatory Commission;
59) “Solar Power Developer or SPD” shall mean anyone who has accepted the LOA then, enters into a PPA with the Procurer for supply of solar power and has legal ownership of all the equipment of the Project;
60) “State DISCOMs” shall mean Distribution licensees in the state Company Limited and its Distribution companies individually or jointly both;
61) “Statutory Auditor” shall mean the auditor of a Company appointed under the provisions of the Companies Act, 1956 or Companies Act, 2013 or under the provisions of any other applicable governing law;
62) “Successful Bidder(s)” shall mean the Eligible Bidder(s) who quoted the RA L1 Tariff for each Project category pursuant to this RFP for implementation of Projects as per the terms and condition of the RFP Documents or the Eligible Bidder(s) other than Bidder with RA L1 Tariff and to whom LOA has been issued by MAHAPREIT;
63) “Term of PPA” shall mean the period from the Execution Date until the Expiry Date;

64) “Year” shall mean 365 Days or 366 Days in case of leap year when February is of 29 Days;

C. INTERPRETATIONS

1. Words comprising the singular shall include the plural & vice versa
2. An applicable law shall be construed as reference to such applicable law including its amendments or re-enactments from time to time.
3. A time of day shall save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time.
4. Different parts of this RFP are to be taken as mutually explanatory and supplementary to each other and, if there is any differentiation between or among the parts of this RFP, they shall be interpreted in a harmonious manner so as to give effect to each part.
5. As per MNRE OM no. 283/3/2018- GRID Solar-dated 9 March 2021 followed by appropriate notification of Ministry of Finance, Govt. of India, imposition of basic customs duty (BCD) from 1 April 2022 shall not be treated as change in law. However, any future changes in it after last date of online bid submission shall be given appropriate treatment under change in law.

SECTION-I: INTRODUCTION

1. INTRODUCTION:

1.1. "Request for Proposal (RFP) for Tariff Discovery and Selection of Solar Power Developers for Implementation of an Aggregate Capacity of 500 MW, with a 50% 'GREENSHOE' Option, for Grid-Connected Rooftop Solar PV Projects under the RESCO Model, for Sale of Solar Power at Various MSME Units in the States of Maharashtra, Goa, Gujarat, Uttar Pradesh, and Andhra Pradesh" in accordance with MNRE/ SERC/ concerned distribution licensee norms.

1.2. The Bidder(s) are advised to read carefully all instructions and conditions of this RFP and understand the scope of work completely. All information and documents required as per the RFP must be furnished with the bid. MAHAPREIT reserves the right to seek clarifications on submitted bids. Failure to provide the information and/or documents as required shall render the bid(s) unacceptable for further evaluation and may lead to rejection of the bid(s). All the responsive bidders meeting the eligibility criteria shall be treated at par. Financial Bid of only the Eligible Bidder(s) shall be opened.

1.3. Bidder shall be deemed to have examined the RFP, to have obtained information in all matters whatsoever that might affect carrying out of works in line with the scope of work specified in the RFP at the Bid price and to have satisfied himself of the sufficiency of his Bid. The Bidder shall be deemed to know the scope, nature and magnitude of the works and requirement of materials, equipment, tools and labour involved, wage structures and as to what all works RESCO shall have to complete in accordance with the RFP, irrespective of any defects, omissions or errors that may be found in RFP. It is assumed that Bidder has satisfied himself with the site conditions at the Premises of Procurer and has assessed the quantum of work required to comply with the RFP and PPA conditions.

SECTION-II: BID DETAILS

2. BID DETAILS:

2.1. The bidding process is for Implementation of approximate five hundred (500) MW capacity with a 50% GREENSHOE option for Grid Connected Roof Top Solar PV Systems, for Sale of Solar Power under RESCO Model, at various MSMEs in the state of Maharashtra, Goa, Gujarat, Uttar Pradesh and Andhra Pradesh

2.2. Bidder shall be required to Bid in one or more Project categories as mentioned in below table. The Bidders are advised to understand and satisfy themselves in regards with the detail provided about the various Projects Categories in Annexure – III.

Project category	Capacity slab	Total Estimated Capacity in MW	Estimated average cost of the system MW
A1	MSMEs having sanctioned demand from 20 kW to 100 kW	125	3,75,00,000/-
A2	MSMEs having sanctioned demand from 101 kW to 250 kW	125	
A3	MSMEs having sanctioned demand from 251 kW to 1000 kW	125	
A4	MSMEs having sanctioned demand above 1000 kW	125	
	Total	500	

2.3. A Bidder must bid for a minimum of one (1) Project category. A Bidder can bid for all Project categories subject to fulfilment of Eligibility Criteria as mentioned in Clause 4.2.

2.4. Bidder shall be required to quote Tariff ("Quoted Tariff") in the Financial Bid which shall be inclusive of all charges, taxes and duties. The Quoted Tariff shall be in (Rupees/Unit) up to two (02) decimal places.

2.5. Bidder should ensure compliance to the Ministry of New and Renewable Energy's ALMM guidelines, as amended from time to time, and provide an undertaking for the same as per FORMAT 16: UNDERTAKING for ALMM GUIDELINES

2.6. Key Dates

S. No.	Tender Stage	Date	Time (Hrs.)
1.	Date of issue of RFP	29/05/2025	1800
2.	Purchase of RFP Start Date	29/05/2025	1800
3.	Pre-Bid Meeting	30/06/2025	1500
4.	Purchase of RfP end date	15/07/2025	1600
5.	Online Bid Submission End Date	15/07/2025	1600

6.	Mandatory Submission of original Hard Copy of Bid Security, if submitted in the form of Demand Draft/FDR/Bank Guarantee only	15/07/2025	1700
7.	Technical Bid &Bid Security Opening Date	16/07/2025	1500
8.	Financial Bid Opening Date (L1 Rate)	To be intimated later	

2.7. Successful Bidder shall pay facilitation charge to the MAHAPREIT. The payment has to be made by the Successful Bidder, in the form of annuity or solar generation billed as defined in section 4.33.

2.8. The bidder shall be required to submit a bid for a minimum capacity of 25 MW in each category. Bids quoting less than 25 MW in any category shall be deemed non-responsive and shall not be considered for evaluation.

2.8. MAHAPREIT reserves the right to determine and allocate the project capacity across the state as deemed appropriate

SECTION-III: INSTRUCTIONS TO THE BIDDER

3. INSTRUCTIONS TO THE BIDDER:

3.1. The total capacities in this tender has been grouped into different Project categories. Bidders can place bid for one or multiple Project categories by paying the Tender fees once at https://www.mahatenders.gov.in/

3.2. Further, Bidder must note that for evaluation of qualification against Financial Eligibility Criteria, following conditions shall be applicable:

a) Bidder shall establish either net-worth or turnover as required under this RFP.

b) In-case Bidder/Lead Member of Consortium has referred its Affiliate to meet the Financial Eligibility criteria, then the same relationship with the Affiliate by the Bidder shall continue at least for the period of First Operational Year of each Project under the Project category. Further, Affiliate of Bidder and member of Consortium shall furnish information as sought in FORMAT 9 and FORMAT 12.

3.3. A Bidder shall not have a conflict of interest for the bid Project category. Bidder(s) shall be disqualified in the Project category(s) where it has conflict of interest. In a particular Project category, the Bidder may be considered to have conflict of interest with one or more parties in this bidding process, if:

a) A Bidder submits more than one Bid in the bidding process, either individually [including bid submitted as authorised representative on behalf of one or more Bidder(s)] or as Member of consortium.

b) They have a relationship with each other, directly or through common third parties, that puts them in position to have access to information about or influence on the Bid of another Bidder or influence the decisions of MAHAPREIT regarding this bidding process.

3.4. MAHAPREIT has rights to annul/cancel the bid of Bidders who will take any assistance or support, except as may be required by MAHAPREIT, in any form from any of the independent consultant or consulting agency who is directly associated with MAHAPREIT during preparation of RFP and PPA.

3.5. Instruction to Bidders on E-Tendering

a) For participation in e-tendering module, it is mandatory for Bidders to get registration on website https://www.mahatenders.gov.in/ Therefore, it is advised to all Bidders to get register at the E-Procurement portal at the earliest.

b) Tender documents can be downloaded from website https://www.mahatenders.gov.in/ free of cost. Bidders need to submit the Tender fees on or before the time of online submission of the bid.

c) Service and gateway charges shall be borne by the Bidders.

d) Upon enrolment, the Bidders will be required to register their valid Digital Signature Certificate (DSC) of appropriate class as specified for the E-

Procurement system (in the name of person who will sign the proposal) in the form of smart card/e-token, from any of the licensed Certifying Authority recognized by CCA India (e.g. Sify/nCode/eMudhra, etc).

e) For further information regarding issue of Digital Signature Certificate, the Bidders are requested to visit website https://www.mahatenders.gov.in/ Please note that it may take up to 3 to 5 working Days for issue of Digital Signature Certificate. MAHAPREIT will not be responsible for delay in issue of Digital Signature Certificate.

f) The Browser should be Java enabled. Java Runtime Environment (JRE) should be installed in the client system. This can be downloaded from the download links of the eProcurement System.

g) If Bidder is participating for the first time in e- tendering, then it is advised to fulfil all formalities, such as registration, obtaining Digital Signature Certificate, etc. well in advance.

h) Bidders are requested to regularly visit our e-tendering website for any clarification and / or extension of due date.

i) Bidder must positively complete online e-tendering procedure at https://www.mahatenders.gov.in/

j) MAHAPREIT shall not be responsible in any way for delay /difficulties/inaccessibility of the downloading facility from the website for any reason whatever.

k) Whosoever on behalf of the Bidder is submitting the tender by his Digital Signature Certificate, shall invariably upload the scanned copy of the authority letter, as well as submit the copy of the same in physical form with the offer of particular Bid.

l) After the final submission of bid, Bidder should ensure that he has received the acknowledgment slip and should keep this slip until opening of the Bid. If acknowledgment slip is not generated, it means the Bid is not submitted.

3.6. The Bidders shall have to submit their Financial Bid and Technical Bid along with required relevant documents/ certificates, if any, online only (duly encrypted bids) as per time schedule (Key dates) as mentioned in RfP. Only documents/ certificates on stamp papers, Bid Security (as applicable) and such other documents as may be prescribed by MAHAPREIT, as a part of Technical Bid shall be submitted to MAHAPREIT in original hard copies and the same should reach to the office undersigned by the Key Dates.

3.7. If qualified bidder discovered as L1 bidder or matching the L1 price denies to execute or enter into contract/sign in the contract agreement the respective bidder will be debard/blacklisted AND EMD submitted by the bidder shall be forfeited.

3.8. For any type of clarification, Bidders can visit https://www.mahatenders.gov.in/ and can call help desk mentioned in the website.

3.9 Other instructions to the bidder:

1. To View-Tender Document, Notice, Detailed Time Schedule, Tender Document for any Tender and subsequently purchase the Tender Document and its supporting documents, kindly visit following e-Tendering website of Government of Maharashtra: https://mahatenders.gov.in

2. Bidders should enroll themselves in https://mahatenders.gov.in (https://mahatenders.gov.in/nicgep/app?component=%24WebHomeBorder.%24WebRightMenu.%24DirectLink&page=Home&service=direct&session=T)

3. Bidder should have Class-3 Digital Signature for the submission of Bids.

4. To purchase a Class 3 digital signature online in India, you can visit websites like e-Mudhra, ID Sign, or Sign your doc, which offer various options for individuals and organizations, including signing-only, encryption, and combo certificates with different validity periods. https://emudhradigital.com/

5. For new bidders pls go through below video link for more details of enrollment https://www.youtube.com/watch?v=JzU117fCSTk

6. If bidder facing Digital sign issue at the time enrollment or after login - https://www.youtube.com/watch?v=njbZRuh-koM&list=PL2kwg9QSaSkpCp1ItGgi4b5BNhTwNOLNo or https://www.youtube.com/watch?v=Z85aG4LpqtY

7. To search MAHAPREIT tenders Select Organisation as “Social Justic and Special Assistance” Under its Sub-Department as “MAHATMA PHULE RENEWABLE ENERGY & INFRASTRUCTURE TECHNOLOGY”.

8. For new bidders kindly go through the Bidders Manual Kit https://mahatenders.gov.in/nicgep/app?page=BiddersManualKitsservice=page particularly Registration of Bidders document.

9. For FAQ’s pls go through https://mahatenders.gov.in/nicgep/app?page=FAQFrontEnd&service=page

10. For EMD and Tender fees payments Bidders who are required Internet banking facility only (No Debit/ Credit card, UPI or any other payment option is allowed.

11. For paying EMD and Tender Fees through Net Banking using other banks (Other than SBI Bank) we are requested to make online payment four days in advance.

12. From 15th August 2024 application fees of Rs 500 per bid shall be charged from the bidders by Government of Maharashtra.

13. For online Payment related issues, kindly send an email with Bank Reference Number to this email ID merchant@sbi.co.in for clarifications.

14. For any technical related queries please call at 24 x 7 Help Desk Numbers as below 120-4001, 0120-4001 005, 0120- 4493395
International Bidders are requested to prefix 91 as country code

15. E_Mail Support

For any Issues or Clarifications relating to the published tenders, bidders are requested to contact the respective Tender Inviting Authority Technical - support-eproc@nic.in

4. ELIGIBILITY CRITERIA

4.1. GENERAL

The Bidder should be a body corporate incorporated in India under the Companies Act, 1956 or 2013 including any amendment thereto or a Partnership Firm having executed partnership deed and registered as per sections 58 & 59 of the Partnership Act, 1932, as amended or a Limited Liability Partnership Firm (LLP) registered under section 12 of Limited Liability Partnership Act, 2008, as amended or registered Sole Proprietor. A copy of certificate of incorporation, partnership deed or LLP/ Sole Proprietor registration, as applicable and relevant, shall be enclosed with FORMAT 2.

Bidder or any member of Consortium having been blacklisted by MAHAPREIT or by any Govt./PSU, for whatever reasons, shall not be eligible/ allowed to participate in this RFP.

Bidder or Consortium shall be ineligible for participation in this RFP in following cases:

i. Mahapreit reserves the right for cancellation/reduction in the quantity of issued work order

ii. If Bidder or any member of consortium is involved in litigation or arbitration with MAHAPREIT arising out of work completed or under execution by it, of value more than or equal to five percent (5%) of cumulative value of Work Order(s) awarded in last five (5) Years. An undertaking in this regard shall be submitted by the Lead Bidder on his letterhead, duly signed by the authorized representative of the bidding entity.

4.2. TECHNICAL ELIGIBILITY CRITERIA

i. A1 Category: 20kW- 100 kW

The Bidder must have experience in Design, Supply, Installation & Commissioning of Grid Connected Solar PV Power Plants of cumulative Capacity more than 200 kW. The Solar PV Power Plants and Solar Systems must be commissioned and should be operating satisfactorily for a period not less than 1 year.

AND

The Bidder must have experience in Design, Supply, Installation & Commissioning of at least 01 (One) Grid Connected Solar PV Power Plants of individual minimum capacities more than 20 kW. The Solar PV Power Plants and Solar Systems must be commissioned and should be operating satisfactorily for a period not less than 1 year.

The last date of bid submission will be the cut-off date for consideration of such experience.

ii. A2 Category: 101 kW-250 kW

The Bidder must have experience in Design, Supply, Installation & Commissioning of Grid Connected Solar PV Power Plants of cumulative Capacity more than 500kW. The Solar PV Power Plants and Solar Systems must be commissioned and should be operating satisfactorily for a period not less than 1 year.

AND

The Bidder must have experience in Design, Supply, Installation & Commissioning of at least 01 (One) Grid Connected Solar PV Power Plants of individual minimum capacities more than 100kW. The Solar PV Power Plants and Solar Systems must be commissioned and should be operating satisfactorily for a period not less than 1 year.

The last date of bid submission will be the cut-off date for consideration of such experience.

iii. A3 Category: 251 kW-1000 kW

The Bidder must have experience in Design, Supply, Installation & Commissioning of Grid Connected Solar PV Power Plants of cumulative Capacity more than 1000kW. The Solar PV Power Plants and Solar Systems must be commissioned and should be operating satisfactorily for a period not less than 1 year.

AND

The Bidder must have experience in Design, Supply, Installation & Commissioning of at least 01 (one) Grid Connected Solar PV Power Plants of individual minimum capacities more than 100kW. The Solar PV Power Plants and Solar Systems must be commissioned and should be operating satisfactorily for a period not less than 1 year.

The last date of bid submission will be the cut-off date for consideration of such experience.

iv. A4 Category 1000 kW Above

The Bidder must have experience in Design, Supply, Installation & Commissioning of Grid Connected Solar PV Power Plants of cumulative Capacity more than 2000kW. The Solar PV Power Plants and Solar Systems must be commissioned and should be operating satisfactorily for a period not less than 1 year.

AND

The Bidder must have experience in Design, Supply, Installation & Commissioning of at least 01 (One) Grid Connected Solar PV Power Plants of individual minimum capacities more than 500kW and 02 (Two) Grid Connected Solar PV Power Plants of individual minimum capacities more than 250kW. The Solar PV Power Plants and

Solar Systems must be commissioned and should be operating satisfactorily for a period not less than 1 year.

The last date of bid submission will be the cut-off date for consideration of such experience. Bidder will be required to furnish an undertaking in this regard as per the FORMAT 12: FORMAT FOR CONSORTIUM AGREEMENT

The bidder shall have prior experience in executing projects amounting to at least 30% of the capacity for which the bid is submitted. Documentary evidence in support of the same shall be furnished along with the bid. Bids not meeting this criterion shall be considered non-responsive.

4.3. FINANCIAL ELIGIBILITY CRITERIA:

The Bidder should have either minimum Net Worth of INR twenty five (25) lakhs per MW or Turnover of INR One (1) Crore per MW of connected rooftop Solar PV Project for Project category, subject to provisions of Clause 3. In case a Bidder is submitting bid for two or more Project categories, then financial requirement shall be met on cumulative basis by adding individual financial requirement for each Project category for which Bidder is participating. In case of Consortium, Net worth or Turnover should be fulfilled jointly by members of consortium.

The Computation of Net Worth shall be based on unconsolidated audited annual accounts of either for FY 2023-24 or FY 2024-25, whichever is latest. The formula of calculation of net-worth & turnover shall be as per Companies Act 2013.

Whereas bidders using turnover criteria should have minimum average turnover of INR One (1) Crore per MW of Grid connected rooftop Solar PV Project for Project category during the last three (3) years ending either March 2024 or March 2025.

In relation to a Partnership Firm/ Limited Liability Partnership Firm, the Net- worth shall be equal to Partner's Capital in case of a Partnership Firm/ Limited Liability Partnership Firm and Proprietor's Capital Account in case of Sole Proprietor (including any reserves)

Note:

i. All requisite documents, such as Balance Sheet, P&L Account, Schedules etc., duly certified by a Chartered Accountant (CA) and the Bidder, in support of Bidder claim for meeting the Financial Eligibility Criteria shall require to be submitted.

ii. It is essential to submit Financial Eligibility Criteria requirement and undertaking form as attached in FORMAT 8 and FORMAT 10 of this RFP document.

a) For the purposes of meeting financial requirements, only latest unconsolidated audited annual accounts shall be used. However, audited consolidated annual accounts of the Bidder may be used for the purpose of Financial Eligibility requirements provided the Bidder has at least twenty six percent (26%) equity and control in each company whose accounts are merged in the audited consolidated accounts.

b) Bidder shall furnish documentary evidence as per the FORMAT 9, duly certified by Authorized Signatory and the Statutory Auditor / Practicing Chartered Accountant of the Bidder in support of their financial capability.

c) Bidder can use its own financial strength or of its Affiliate to fulfill the Financial Eligibility Criteria mentioned in RFP.

d) In case of Consortium, Financial Eligibility Criteria has to be met jointly by Lead Member or its Affiliate.

e) Bidders shall have to give a declaration to the effect that they fulfill the terms and conditions of eligibility as per FORMAT 14: DECLARATION. If the declaration to above effect is found to be false, the eligibility would be considered null and void.

4.4. CHECK-LIST:

To ensure that the online and only necessary hard copy documents submission Bid is complete in all respects, checklists are required to be duly tick marked/ filled for the enclosures which are attached with the RFP document. Hard copy submission shall contain only those documents as per SECTION- IV: Checklist 2 under this RfP. The requisite documents required are indicated in the checklists. It is essential for the Bidders to submit checklists duly sealed and signed with envelope. However, this checklist is indicative, and Bidder shall be responsible for meeting all information requirements as per provisions of this RFP.

4.5. INCORPORATION OF A PROJECT COMPANY:

a. The Selected Bidder executing the Project, if being a single company, shall ensure that its shareholding in the SPV/ Project Company executing the PPA, shall not fall below 51% at any time prior to 01 (one) year after the COD. In the event the selected Bidder is a consortium, then the combined shareholding of the consortium members in the SPV/ Project Company executing the PPA, shall not fall below 51% at any time prior to 01 (one) year after COD. However, in case the Project is being set up by a listed Company, this condition will not be applicable.

b. In case of the selected Bidder itself executing the PPA, it shall ensure that its promoters shall not cede control (Control shall mean the ownership, directly or indirectly, of more than 50% of the voting shares of such Company or right to appoint majority Directors), till 01 (one) year after the COD. However, in case the Project is being set up by a listed Company, this condition will not be applicable.

c. In case of companies having multiple promoters (but none of the shareholders having more than 50% of voting rights and paid up share capital), it shall be considered as a company under joint control. In such cases, the shareholding pattern in the company as submitted at the time of bidding, shall be maintained for a period of 01 (one) year after COD.

d. Any change in the shareholding after the expiry of 01 year after COD can be undertaken under intimation to MAHAPRIET and the Client Organization

4.6. BID SUBMISSION BY THE BIDDER:

a. The information and/or documents shall be submitted by the Bidder as per the

formats specified in this document.

b. Bid(s) that are incomplete in any respect or those that are not consistent with the requirements as specified in this RFP or those that do not adhere to formats prescribed herein, wherever specified, may be considered non- responsive. However, MAHAPREIT reserves the right to seek additional information/clarifications from the Bidders, if found necessary, during the course of evaluation / processing of the Bid(s). Non-submission or delayed submission of such additional information or clarifications sought by MAHAPREIT within the timeline provided by the MAHAPREIT may be a ground for rejecting the Bid(s).

c. Each format has to be duly signed and stamped by the authorized signatory of the Bidder. In case of a Consortium, it has to be signed by authorised representative of the Lead Bidder. Strict adherence to the necessary documents required to be submitted as original hard copies in Envelope, as per clause 4.10 shall be ensured, failure on this account may lead to rejection of Bid.

d. The Bidder shall furnish documentary evidence in support of meeting eligibility criteria as indicated in this RFP to the satisfaction of MAHAPREIT and shall also furnish unconsolidated/ consolidated audited annual accounts in support of meeting financial requirement, which shall consist of unabridged annual accounts, profit and loss account, profit appropriation account, auditor's report, etc., as the case may be.

e. The bidding Company should designate authorised representative but not more than three (3) persons to represent the bidding Company in its dealings with MAHAPREIT. The person should be authorized to perform all tasks including, but not limited to providing information, responding to enquires, signing of Bid etc. The bidding Company should submit, along with Bid, a Power of Attorney (To be stamped on non – judicial stamp paper of Rs.1000 of the state where the document is made) in original as per FORMAT 7, authorizing the signatory of the Bid.

4.7. CLARIFICATIONS AND PRE-BID MEETING:

a. The Bidder may seek clarifications or provide comments on RFP in writing, through a letter at MAHAPREIT's given address on or before the date and time mentioned in Key Dates as per RfP.

b. The Bidder(s) or their authorized representative(s) is /are invited to attend pre-bid meeting(s), which will take place on date(s) as specified in Bid Information Sheet, or any such other date as notified by MAHAPREIT.

c. The purpose of the pre-bid meeting will be to clarify any issues regarding the RFP including in particular, issues raised in writing and submitted by the Bidder

d. MAHAPREIT is not under any obligation to entertain/ respond to suggestions made or to incorporate modifications sought for.

4.8. BID DOCUMENTS:

Except as required in this RfP, all necessary and relevant documents as a part of

Technical Bid and Financial Bid are to be submitted only ONLINE. No Financial Bid related document shall be submitted offline/ hard copy. None of the documents/ papers as a part of Technical Bid shall be submitted offline/ hard copies except as provided in this RfP. Bid documents shall comprise of following:

- Covering Letter as per prescribed FORMAT 1
- Tender fees Transaction statement
- Proof of Bid Security of required value as mentioned in Clause 4.14 or

FORMAT 4, if applicable;

- General particulars of Bidder as per FORMAT 2 of this RFP, including Certificate of Incorporation of Bidder/ Affiliate as applicable.
- Bidder's composition and ownership structure as per prescribed FORMAT 3 as shareholding certificate for a Company/Partner contribution for an LLP certified by Director/practicing Chartered Accountant/Company Secretary and authorised signatory of the Bidder (as applicable).
- Original power of attorney (To be stamped on non – judicial stamp paper of Rs.1000 of the state where the document is made, as per FORMAT 7) issued by the Bidder in favour of the authorized person signing the Bid, in the form prescribed in this RFP (Power of Attorney must be supplemented by Board Resolution to above effect for the company incorporated under Company Act 1956 or Company Act2013).
- FORMAT 8 for meeting Financial Eligibility Requirements along with all supporting documents.
- FORMAT 9, if applicable, supported by Board Resolution of the Affiliate.
- Undertaking(s) from the member of Consortium or Affiliate of Bidder/ member of Consortium as per FORMAT 10, as applicable.
- FORMAT 12 for Consortium Agreement, if applicable.
- FORMAT 13: POWER OF ATTORNEY IN FAVOR OF LEAD MEMBER OF THE CONSORTIUM. (To be stamped on non – judicial stamp paper of Rs.500 of the state where the document is made)
- FORMAT 14: DECLARATION
- FORMAT 15: UNDERTAKING
- Signed and stamped Copy of the finalized RFP and PPA and all the amendments, addendum & clarifications are NOT required to be submitted (not to be submitted online or offline).

4.9. METHOD OF BID SUBMISSION

a) Bidders are required to submit Technical Bid, along with all relevant documents as detailed in Clause 4.8 above through online only. However, original hard copies of following documents shall be submitted to MAHAPREIT as per key dates before the

Bid Deadline: -

(i) Covering Letter as per prescribed FORMAT 1

(ii) Bid Security of required value as mentioned in Clause 4.14, and FORMAT 4, if applicable;

(iii) Original power of attorney (To be stamped on non – judicial stamp paper of Rs. 500.00 of the state where the document is made, as per FORMAT 7) issued by the Bidder in favour of the authorized person signing the Bid, in the form prescribed in this RFP (Power of Attorney must be supplemented by Board Resolution to above effect for the company incorporated under Company Act 1956 or Company Act2013)

(iv) FORMAT 13: POWER OF ATTORNEY IN FAVOR OF LEAD MEMBER OF THE CONSORTIUM. (To be stamped on non – judicial stamp paper of Rs. 500.00 of the state where the document is made).

(v) Such other minimum documents/ certificates in original/ copy as MAHAPREIT may reasonably prescribe.

b) Financial Bid shall be submitted only through online mode with due encryption.

The Bidder has the option of sending original hard copies of documents as mentioned in SECTION VI: CHECKLIST under this RfP as a part of Technical Bid either by registered post or by speed post or by hand delivery, so as to reach MAHAPREIT by the Bid Deadline. MAHAPREIT shall not be responsible for any delay in receipt of such hard copy submission as required under this RfP. It should be noted that except online Financial Bid, no other envelope/ document should contain any information/document relating to Financial Bid. MAHAPREIT shall not be responsible for premature opening of the Financial Bid in case of non-compliance of above.

All pages of the Bid, except for the Bid Security and any other document executed on non-judicial stamp paper, forming part of the Bid and corrections in the Bid, if any, must be signed by the authorized signatory on behalf of the Bidder. In case of a Consortium, it has to be signed by the authorized signatory of the Lead Bidder. It is clarified that the same authorized signatory shall sign all pages of the Bid. Further, any published document submitted with the Bid shall be signed by the authorized signatory. Bidder shall submit the original/ copies of Bid documents, as applicable, duly signed by their authorized signatory of the Bidder.

4.10. BID DEADLINE:

The Bidder should submit the online and physical documents of the Bid on or before the time schedule mentioned in Bid Information Sheet.

4.11. BID VALIDITY PERIOD:

The Bid shall remain valid for a period of six (6) Months from the date of opening of Financial Bid. In case, Successful Bidder is revoking or cancelling his offer or varying any term & conditions in regard thereof or not accepting Letter of Award (“LOA”) within 15 days of issuance of LOA, MAHAPREIT shall take actions against the Bidder as

per relevant clause of the RfP and as deemed necessary. The date of issuance of LOA shall be intimated by the MAHAPREIT to the Successful Bidder. In exceptional circumstances if LOA is not issued to the Successful Bidder(s) during the Bid Validity Period, the MAHAPREIT may solicit the Bidder's consent to extend the Bid Validity Period. In such circumstances, the Bid Security provided shall also be suitably extended by the Successful Bidder.

4.12. COST OF BIDDING:

The Bidder shall bear all the costs associated with the preparation and submission of Bid, MAHAPREIT in any case will not be responsible or liable for these costs, under any conditions. The Bidder shall not be entitled to claim any costs, charges and expenses of and incidental to or incurred by him through or in connection with submission of Bid even though MAHAPREIT may elect to modify/withdraw the invitation of Bid.

4.13. BID SECURITY:

Interested Bidder shall furnish Bid Security of INR 2,25,000 /MW for each Project category for which Bidder is placing Bid. Bidders placing Bid for more than one Project category could furnish single Bid Security of value equivalent to the sum of the of Bid Securities required for each Project categories in which Bidder is participating. The Bid Security as defined under shall be paid online at https://www.mahatenders.gov.in/ portal.

Alternatively, for convenience of Bidders and avoid any exigency for Bidders, required Bid Security may be submitted to MAHAPREIT in the form of cross Demand Draft drawn in favour of “MAHAPREIT” payable at Mumbai from a nationalized/ scheduled bank, or FDR in favour of MAHAPREIT, Mumbai through A/C of bidder or bank

guarantee as per prescribed FORMAT 4: FORMAT FOR BID SECURITY

Details of bank account of MAHAPREIT is as below:

Name of party	Mahatma Phule Renewable Energy & Infrastructure Technology Limited
Name of bank	SBI
Account no	42806014198
IFSC	SBIN0009995
MICR Code	400002133
Branch Code	9995

The initial validity of Bid Security shall be for a period of three hundred (300) Days from the Bid Deadline, which shall be extended by the Bidder on the advice of MAHAPREIT, if required, at any time either before bid process is concluded or during Rate Validity Period of Agreement

Bid Security shall be returned to all other Bidders except Successful Bidder, within fifteen (15) Days from date of submission of first PBG by the Successful Bidders or within three (3) Months of opening of Financial Bid result, whichever is earlier. The bid security for the successful bidder will be returned after submission of PBG associated with last PPA with such Successful Bidder or upon expiry of validity of Bid Security, whichever is earlier.

The Bid Security shall be denominated in Indian Rupees and:
Bid Security should be confirmed for payment to MAHAPREIT by respective banks.

a. Bid Security, if in the form of bank guarantee, shall be submitted in its original form to MAHAPREIT. Copies of Bid Security shall be uploaded online.
b. Successful Bidder of such Project categories not submitting the MAHAPREIT administration cost as per provisions of RfP, Bid security shall be forfeited of such Successful Bidders

Further, provisions of this Clause 4.13 will be invoked on occurrence of any of the following events:

a. If a Bidder withdraws/revokes or cancels or unilaterally varies his Bid in any manner during the Bid Validity Period.
b. If Successful Bidder fails to accept the LOA or doesn't submit the PBG of needful value within prescribed time.
c. If Successful Bidder fails to sign or refuses to execute PPA within the indicated time unless the default / delay is due to Procurer.
d. If the Administrative Charges are not submitted.

4.13.1 Bidders placing Bid for more than one Project category may furnish individual Bid Security for each Project categories. However, Bidders placing Bid for more than one Project category may furnish single Bid Security of value equivalent to the sum of the of Bid Securities required for each Project categories in which Bidder is participating.

4.13.2 MSMEs having valid UDYAM registration as on the last date of bid submission only are exempted from submission of Cost of the RfP document, Bid Security or Earnest Money Deposit (EMD). For a Consortium to be eligible for exemption from submission of Cost of RfS document, Bid Processing Charge & Earnest Money Deposit, all the members of the Consortium shall be registered as MSE.

4.13.3 Bid Security shall be returned to all Bidders except Successful Bidder, within fifteen (15) Days from date of submission of first PBG by the Successful Bidder(s) or within three (3) Months of opening of financial results, whichever is earlier. The Bid Security of the Successful Bidder shall be returned after submission of PBG associated with last PPA with such Successful Bidder or upon expiry of validity of Bid Security, whichever is earlier.

4.14. OPENING OF BID:

Technical Bid (Envelope I and Envelope II) of the Bidder shall be opened at the time mentioned in Key Dates at the venue indicated in this RFP.

4.15. RIGHT TO WITHDRAW THE RFP AND TO REJECT ANY BID:

This RFP may be withdrawn or cancelled by the MAHAPREIT at any time without assigning any reasons thereof. In such cases, submitted Bid Security will be returned to all respective bidders. The MAHAPREIT further reserves the right, at its complete discretion, to reject any or all of the Bids without assigning any reasons whatsoever and without incurring any liability on any account.

The MAHAPREIT reserves the right to interpret the Bid submitted by the Bidder in accordance with the provisions of the RFP and make its own judgment regarding the interpretation of the same. In this regard the MAHAPREIT shall have no liability towards any Bidder and no Bidder shall have any recourse to the MAHAPREIT with respect to the selection process.

Bid(s) that are incomplete in any respect or those that are not consistent with the requirements as specified in this RFP or those that do not adhere to formats prescribed herein, wherever specified, may be considered non-responsive. However, MAHAPREIT reserves the right to seek additional information/clarifications from the Bidders, if found necessary, during the course of evaluation / processing of the Bid(s). Non-submission or delayed submission of such additional information or clarifications sought by MAHAPREIT may be a ground for rejecting the Bid(s). Strict adherence to the documents required to be submitted as per SECTION VI: CHECKLIST shall be ensured, failure on this account may lead to rejection of Bid.

MAHAPREIT reserves its right to vary, modify, revise, amend or change any of the terms and conditions of the RFP before Bid Deadline. The decision regarding acceptance of Bid by MAHAPREIT will be full and final.

4.16. ZERO DEVIATION:

This is a zero-deviation bidding process. Bidder is to ensure compliance of all

provisions of the RFP and submit their Bid accordingly. Conditional Bid or Bid with any deviation to the RFP conditions shall be liable for rejection without any explanation.

4.17. EXAMINATION OF BID DOCUMENT:

Before submission of Bid, Bidder is required to carefully examine the technical specification, terms and conditions of RFP/ Agreement, and other details relating to envisaged work as per the RFP.

The Bidder shall be deemed to have examined the RFP and Agreement, to have obtained information on all matters whatsoever that might affect the execution of the Project activity and to have satisfied himself as to the adequacy of his Bid. The Bidder shall be deemed to have known the full scope, nature and magnitude of the work and related supplies and the requirements of material and labour involved etc. and as to all supplies, he has to complete in accordance with the RFP.

Bidder is advised to submit the Bid on the basis of conditions stipulated in the RFP. Bidder's standard terms and conditions, if any for what-so-ever reasons, will not be considered. The cancellation / alteration / amendment / modification in RFP shall not be accepted by MAHAPREIT and shall invite rejection of such Bid(s).

Bid not submitted as per the instructions to Bidder is liable to be rejected. Bid shall confirm in all respects with requirements and conditions referred in this RFP or its amendments, if any.

The Comprehensive O&M of solar PV system shall include wear, tear, overhauling, machine breakdown, appropriate insurance (Storm, Tempest, Flood, and Inundation (STFI) and Workmanship Insurance) (if and as required), and replacement of defective modules, invertors / Power Conditioning Unit (PCU), spares, consumables & other parts for a period of twenty (20) Operational Years.

4.18. CHANGE IN LAW

4.18.1. "Change in Law" means the occurrence of any of the following events after the Bid

Deadline resulting into any additional recurring/ non-recurring expenditure by the RESCO or any income to the RESCO:

a. 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;
b. 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;
c. the imposition of a requirement for obtaining any Consents, Clearances and Permits which was not required earlier;
d. change in any Consents, approvals or licenses available or obtained for the Project, otherwise than for default of the RESCO, which results in any change

in any cost of or revenue from the business of selling electricity by the RESCO to Procurer under the terms of the PPA;

e. 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 RESCO;
f. change in the Rules, Regulations, Orders or any document issued or released by the CERC/ CEA/ SERC/ State DISCOMs or any other Government Authority;
g. 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 RESCO as per the terms of the PPA but shall not include: (i) any change in any withholding tax on income or dividends distributed to the shareholders of the RESCO, or (ii) change in income taxes applicable for the RESCO.

4.19. TAXES AND DUTIES:

The Financial Bid should include all taxes and duties etc., if any. RESCO shall be entirely responsible for all taxes, duties, license charges, etc. All taxes shall be payable by the RESCO. However, if any new change in tax/duty and cess is effected in the period after the Bid Deadline till the Execution Date, the same will be passed on by the RESCO to the Procurer and vice-versa as determined by the Competent Authority.

4.20. IMPACT OF CHANGE IN LAW:

Any impact due to a 'Change in Law' event for the duration from Bid Deadline till the Execution Date shall be evaluated by MAHAPREIT in consultation with Procurer and passed on as a change in Quoted Tariff, after the project completion, for such period of the Term of PPA as may be reasonable.

4.21. PROGRESS REPORT:

The RESCO shall submit Quarterly progress report to MAHAPREIT from the

Effective Date of first PPA till the COD of last PPA of the Category allotted to him in the prescribed format as mentioned in ANNEXURE – I: PROGRESS REPORT FORMAT. MAHAPREIT shall have the right to depute his/their representatives to ascertain the progress at the premises of work of the RESCO.

4.22. FORCE MAJEURE:

For purpose of this RFP, force majeure shall mean an event beyond the control of the RESCO and not involving his fault or negligence and not foreseeable, in its contractual capacity. Such events may include but are not restricted to Acts of God, wars or revolutions, fires, floods, epidemics, quarantine restriction, fright embargoes, site clearance, etc. Whether a force majeure situation exists or not, shall be decided by MAHAPREIT and its decision shall be final and binding on the RESCO and all other concerned.

In the event that the RESCO is not able to perform his obligations under this Agreement on account of force majeure, he will be relieved of his obligations during the force majeure period.

If a force majeure situation arises, the RESCO shall promptly notify MAHAPREIT and Procurer both in writing, not later than three (3) Days from the date such situation arises (in case, communication is not possible to MAHAPREIT, RESCO shall notify MAHAPREIT not later than one (1) Day from the day when communication system will be restored). The RESCO shall notify MAHAPREIT and Procurer not later than three (3) Days of cessation of force majeure conditions. After examining the cases and associated facts, MAHAPREIT shall decide and grant suitable additional time for the completion of the work, if required.

Failure of such RESCO in timely intimating MAHAPREIT will suspend its right for any relief otherwise eligible under such force majeure conditions.

4.23. APPLICABLE LAW:

The Agreement shall be interpreted in accordance with the laws of India.

4.24. SETTLEMENT OF DISPUTE:

If any dispute of any kind whatsoever arises between MAHAPREIT and the RESCO/ Successful Bidder in connection with or arising out of this RFP including without prejudice to the generality of the foregoing, any question regarding the existence, validity or termination, the parties shall seek to resolve any such dispute or difference by mutual consent.

Notwithstanding any reference to the arbitration herein, the parties shall continue to perform their respective obligations under the Agreement unless they otherwise agree.

Cost of arbitration shall be borne as per the award of the arbitration.

4.25. LANGUAGE:

All documents, drawings, instructions, design data, calculations, operation, maintenance and safety manuals, reports, labels and any other data shall be in Hindi/ English Language. The Agreement and all correspondence between the MAHAPREIT and the Bidder shall be in Hindi/ English language.

4.26. AMENDMENT:

MAHAPREIT reserves the right to modify, amend or supplement RFP documents including all formats and annexures at any time. Bidder are advised to follow and keep track of MAHAPREIT website for updated information till the selection of Successful Bidder. No separate notifications will be issued for such notices/ amendments/ clarification etc. in the print media or individually. MAHAPREIT shall not be responsible and accountable for any consequences to any party.

4.27. SEVERABILITY:

It is stated that each paragraph, clause, sub-clause, schedule or annexure of this contract shall be deemed severable, and, in the event of the unenforceability of any paragraph, clause sub-clause, schedule or the remaining part of the paragraph, clause, sub-clause, schedule annexure & rest of the contract shall continue to be in full force and effect.

4.28. PRICE PREFERENCE:

There is no relaxation in terms of any conditions of the RFP or Processing Charge or Bid Security or PBG for any private company or State or Central company/agency.

4.29. TAX EXEMPTIONS:

MAHAPREIT will extend possible cooperation to Successful Bidder(s)/ RESCO(s) in availing any tax exemptions available under any Policy/Scheme of Central or State Government. However, the responsibility of availing any such exemptions, if any, would rest with the Successful Bidder(s)/ RESCO(s).

4.30. FRAUD AND CORRUPTION

The Bidder(s)/ Successful Bidder(s)/ RESCO(s), suppliers and contractors and their sub-contractors under the contracts are required to observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this, the MAHAPREIT:

I. Defines, for the purpose of this provision, the terms set forth below as follows:
   i. “corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
   ii. “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
   iii. “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
   iv. “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
   v. “obstructive practice” is

      aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a MAHAPREIT’s investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the

investigation;

or

ab) acts intended to materially impede the exercise of the MAHAPREIT's inspection and audit rights.

II. will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;

III. will sanction a firm or individual, including declaring ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a contract; and

IV. will have the right to require that the provision be included in Bidding Documents and in contracts, requiring Bidders, suppliers, and contractors and their sub- contractors to permit the MAHAPREIT to inspect their accounts and records and other documents relating to bid submission and contract performance and to have them audited by auditors appointed by the MAHAPREIT.

4.31. DEBARRED FROM PARTICIPATING IN MAHAPREIT'S TENDER

MAHAPREIT reserves the right to carry out the performance review of each Bidder from the time of submission of Bid onwards. In case it is observed that a Bidder has not fulfilled its obligations in meeting the various timelines envisaged, in addition to the other provisions of the RFP, such Bidder may be debarred from participating in MAHAPREIT's any future tender/ RFP for a period as decided by the Competent Authority.

4.32. PAYMENT SECURITY MECHANISM:

In order to instill confidence and mitigate financial risks for the bidders, MAHAPREIT acknowledges the necessity of providing a Payment Security Mechanism in cases where the procurer is unable to meet the Power Purchase Agreement (PPA) obligations. This section outlines the terms and conditions governing the Payment Security Mechanism provided by MAHAPREIT.

4.32.1. Applicability:

The Payment Security Mechanism will be applicable in situations where the procurer is unable to fulfill its financial obligations under the PPA. The Payment Security Mechanism will be invoked to compensate the bidder for any losses incurred due to non-payment.

4.32.2. Invoking of Payment Security Mechanism:

The Payment Security Mechanism will be invoked under the following circumstances:

a. Non-Payment by Procurer:
   The Payment Security Mechanism will be invoked if the procurer fails to make the stipulated payments as per the terms of the executed PPA.
b. Default Situations:
   In the event of default by the procurer, leading to financial loss for the bidder, the Payment Security Mechanism may be invoked subject to the terms specified in this tender. MAHAPREIT has sole right to decide and declare a “default” situation.
c. The intent of Payment Security Mechanism is to cover the partial risk against the investment made by the RESCO and the guarantee offered is for limited period of PPA. However, the working of Payment Security Mechanism varies from case to case and MAHAPREIT reserve the rights for invocation/cancellation of Payment Security Mechanism.

4.32.3. Payment Security Mechanism Amount:

Payment Security Mechanism amount will be assessed on case to case basis for eligibility only after verification by a third party evaluator.

4.32.4. Payment Security Mechanism Management:

MAHAPREIT will manage the Payment Security Mechanism and is committed to ensuring a transparent and fair process for invoking and releasing the guarantee. Any disputes related to the will be resolved in accordance with the dispute resolution mechanisms specified here:

4.32.5. Modification of Payment Security Mechanism Terms:

Any modifications to the terms of the Payment Security Mechanism, including the amount or conditions, will be subject to mutual agreement between the MAHAPREIT, RESCO and shall documented in writing.

4.33. FACILITATION CHARGE:

MAHAPREIT will levy facilitation charge from the successful bidder, 6% value of allotted capacity with an estimate of 1 MW as mentioned in the RFP will be charged as facilitation charge distributed over the period of 20 years in four installments from the date of issue of LOA. Facilitation charge is a comprehensive package covering validation, service, aggregation, certification, and portal charges, all of which are essential for the efficient execution and ongoing management of the project. These charges contribute to the validation and aggregation of the consumer, ensuring maximum implementation of solar energy projects in MSMEs. Additionally, the facilitation charge includes Payment security mechanism charges, providing financial security and mitigating risks associated with the project. The phased collection of charges over the project's duration aligns with the delivery of services and milestones achieved, promoting accountability and sustained support. This charge structure reflects a strategic investment in the success and longevity of the project, facilitating a robust framework for the deployment of clean energy solutions in Maharashtra, Goa, Gujarat, Uttar Pradesh and Andhra Pradesh. The facilitation charge for the

Implementation of Grid Connected Roof Top Solar PV Systems under the RESCO Model at various locations in the State of Maharashtra, Goa, Gujarat, Uttar Pradesh and Andhra Pradesh is outlined below. The facilitation charge is designed to cover various essential services, validations, certifications, and guarantees associated with the project. These charges will be collected as an annuity over a specified period.

4.33.1. Facilitation Charge Structure:

A facilitation charge of 6% value of allotted capacity will be applicable. This charge includes the following components:

a. Validation
b. Service
c. Aggregation
d. Certification
e. Portal facilitation
f. Payment security mechanism to RESCOs

4.33.2. **Schedule of Facilitation Charge Collection:**

Bidders have two options for payment of facilitation charge payment:

i. Payment in terms of annuity for the first three years of LOA. The facilitation charge will be structured as an annuity and will be paid in accordance with the specified schedule outlined below.

Timeline	**% value of allotted capacity**
At the date of LOA	2%
At the End of 1st Year from the date of LOA	2%
At the End of 2nd Year from the date of LOA	2%

Percentage mentioned above is as per the estimated project cost per MW.

ii. A facilitation charge equivalent to 6% of the total value, distributed on a per-unit basis over the billed solar generation for the 20-year PPA period, calculated based on net present value.

Based on the bid responses and bidder preferences, MAHAPREIT reserves the right to determine the applicable facilitation charge payment option for the bidders.

4.33.3. Compliance:

All payments related to the facilitation charge must be made in accordance with the specified schedule mentioned above. Failure to comply with the payment schedule may result in penalties or other consequences as outlined in the terms and conditions of the Request for Proposal (RFP) document.

By participating in this tender process, the bidder acknowledges and agrees to adhere to the facilitation charge structure and schedule outlined herein. Any questions or clarifications regarding these charges should be addressed through the official communication channels provided in the RFP document.

4.34. Billing Metering and Collection Charges:

For successful implementation of the project; timely activity of metering, billing and collection has to be undertaken by the authoritative agency of Government or Semi-government. MAHAPREIT would like to offer this service on minimal payment of monthly charges as decided by MAHAPREIT.

MAHAPREIT shall undertake the activity of monthly metering, billing and collection of payment collection from MSMEs in consultation with RESCOs. MAHAPREIT shall appoint an agency to undertake this task on behalf of RESCOs, for which it will charge 3% of the PPA rate.

SECTION IV: BID EVALUATION

5. BID EVALUATION:

5.1. THE EVALUATION PROCESS COMPRISES THE FOLLOWING THREE STEPS:

a. Step I- Responsiveness check of Technical Bid and evaluation of Bidders' fulfilment of Eligibility Criteria described in SECTION-III: INSTRUCTIONS TO THE BIDDER.
b. Step II-Evaluation of Financial Bid
c. Step III - Selection of Successful Bidders

5.2. RESPONSIVENESS CHECK OF TECHNICAL BID:

5.2.1. The Technical Bid submitted by Bidder shall be scrutinized to establish responsiveness to the requirements laid down in the RFP. Any of the following may cause the Bid to be considered "Non-responsive" and liable to be rejected, at the sole discretion of MAHAPREIT, subject to sufficient justification:

a. Bid not submitted in prescribed formats.
b. Bid that are incomplete, i.e. not accompanied by any of the applicable and required formats;
c. Bid not accompanied by contents as mentioned in SECTION VI: CHECKLIST.
d. Bid not signed by authorized signatory and /or stamped in the manner indicated in this RFP;
e. Material inconsistencies in the information /documents submitted by the Bidder affecting the Eligibility Criteria;
f. Information not submitted in the formats specified in this RFP;
g. Bid being conditional in nature;
h. Bid not received by the Bid Deadline;
i. Bid having conflict of interest;
j. Bidder makes any misrepresentation;
k. Any other act of Bidder which may be unlawful for the purpose of this RFP.
l. Bid submitted is not in requisite format(s).

Each Bid shall be checked for compliance with the submission requirements set forth in this RFP before the evaluation of Bidder's fulfilment of Financial Eligibility Criteria is taken up.

5.3. ELIGIBLE BIDDER(S) SELECTION METHODOLOGY:

5.3.1. Responsive Bidder(s) shall be evaluated at this stage.

5.3.2. Bidder(s) who meets either Net-Worth or Turnover criteria of a Project category would be termed as Eligible Bidder(s) for that Project category**.**

5.3.3. Financial Bid of Eligible Bidder(s) would be considered and evaluated. All Bidder(s) qualifying Financial Eligibility Criteria shall be placed as equal.

5.4. DISCLOSURE OF LOWEST TARIFF

5.4.1. The Financial Bid of Eligible Bidder(s) with lowest Quoted Tariff for each project category shall be opened on https://www.mahatenders.gov.in/ without disclosing the name of Bidder. Also, other Bidders' identity and bid rates would not be revealed.

5.4.2. The bidders will be arranged in ascending order of their quoted tariff.

5.4.3. The Bidder will be asked to match the L1 tariff rate. First four bidders as per the merit list will be allowed to match the L1 rate. Final empaneled bidder will be L1 & the other four (4) bidders who will agree to match the L1 tariff rate as per the merit list.

5.4.4. Depending on the response and number of eligible bidders, MAHAPREIT may consider next bidders in sequence provided they are willing to match the L1 rate.

5.4.5. There is no ceiling tariff for this RfP. However, MAHAPREIT will have right to decide on reasonableness of rates under this RfP.

5.5. AWARD OF EMPANELMENT TO SUCCESSFUL BIDDERS

5.5.1. MAHAPREIT shall issue a LOA to the Successful Bidder(s). The date of issuance of LOA shall be intimated by the MAHAPREIT to the Successful Bidder(s).

5.5.2. The Successful Bidder(s) has to sign the LOA and submits the same to MAHAPREIT. The MAHAPREIT reserves the right to annul/cancel the LOA of the Successful Bidder(s). In such cases, the Bid Security of the Successful Bidder(s) shall be returned within thirty (30) days of the cancellation date.

5.5.3. At any time, the value of the PBG should not be less than 3% of the value of the work order issued as mentioned in the RFP or part thereof from a nationalized/ scheduled bank, pursuant to respective work orders, with a validity till fifteen (15) Months with a claim period of one (1) month or required to be extended as deemed necessary, from the Effective Date of a PPA. Minimum 30% of the PBG amount should be provided as FDR/Cheque/Demand deposit.
Bank Guarantee as per prescribed FORMAT 5

Note:

a. It is to clarify that if the Successful Bidder is selected to execute the Project under more than one Project category, the PBG shall be submitted separately for each Project category.

b. Nevertheless, Successful Bidder shall have option to submit PBG:
   i. against each PPA after issue of respective work order as prescribed in PPA;
      or
   ii. collectively for combined capacity of Project category for which it is declared as Successful Bidder. This may be submitted after submission of LOA by Successful Bidder or, after issuance of first work order or anytime before prescribed timelines for first PPA.

5.5.4. In case MAHAPREIT annuls/ cancels the LOA issued to the Successful Bidder(s) due to its non-compliance, MAHAPREIT shall offer the part / complete capacity of the incomplete Projects in the Project category(s) to other Successful Bidder(s) in the decreasing order of their Net Worth, based on which bidder has declared his financial eligibility criteria. The MAHAPREIT shall then provide LOA to the Successful Bidder who is interested to perform the task under this tender at RA L1 Tariff of the annulled/ cancelled Project category.

5.5.5. In case none of the Successful Bidder(s) of a Project category is interested in taking the Project category, then MAHAPREIT may cancel the Project category completely / partially or take appropriate decision in such matters at its sole discretion. The decision of Competent Authority shall be final in such matters.

5.5.6. In case, within the Rate Validity Period, any organization or entity proposes to have Project under RESCO Model (new sites) MAHAPREIT shall offer new Project to Successful Bidder of the Project category, at the same RA L1 Tariff, with firstly similar type of Procurer and then based on the size of the Project. MAHAPREIT's decision would be final and binding to all the stakeholders.

5.6. SIGNING OF PPA

5.6.1. The MAHAPREIT, Successful Bidder and the Procurer shall ensure that the PPA is signed within Sixty (60) Days of mutual consent between both Consumers and RESCOs on the basis of Project Capacity as ascertained by Successful Bidder through actual on-ground survey of concerned site.

5.6.2. The commencement of the Power Purchase Agreement (PPA) signing timeline, will commence upon the mutual consent between both Consumers and Renewable Energy Service Companies (RESCOs).

5.6.3. Any delay beyond sixty (60) Days in signing of PPA from the date of respective mutual consent between Consumers and RESCOs, following procedure shall be adopted:

   a. In case the delay is on part of the MSME consumer, then such consumer shall not be considered for further installation process by that RESCO.
   b. In case the delay is on part of RESCO, the capacity shall be locked for 60 days from the date of mutual consent.

5.6.4. The Procurer shall be required to setup the Payment Security Mechanism as per the PPA.

5.6.5. Any delay occurring beyond sixty (60) Days in signing of PPA from the mutual consent between the Consumers and RESCOs, date due to the reason attributable to the Successful Bidder(s), shall be considered as Refusal to execute the PPA and clause 5.7 shall be applicable.

5.6.6. An extension may be provided to the parties if there is a delay beyond sixty (60) Days from the work order, as determined by the Competent Authority of the MAHAPREIT.

5.7. REFUSAL TO EXECUTE THE PPA AND PENALTY

In the event that the Successful Bidder(s) declines or fails to execute the Power Purchase Agreement (PPA) for the Project(s) falling under a specific Project category for which the Letter of Award (LOA) has been duly accepted and signed, the Performance Bank Guarantee (PBG) submitted by the Successful Bidder(s) shall be forfeited and the said LOA shall stand annulled and/or cancelled in respect of the Project(s) so refused. Furthermore, the Successful Bidder(s) shall be liable to penalties for the rejection of the site(s) offered. The Earnest Money Deposit (EMD) submitted by the Bidder shall also be forfeited, and MAHAPREIT reserves the right to initiate appropriate legal action against the Bidder, as deemed fit.

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SECTION V: SCOPE OF WORK

6. Details of Works

6.1. Designing, engineering, finance, supply, installation, testing and Commissioning of various capacities 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 Comprehensive O&M for period of twenty (20) Operational Years for Sale of Solar Power. RESCO would have to take approval for the interfacing the Project with Grid/Electrical Loads of every location from distribution licensee/ CEIG, as applicable.

MAHAPREIT will support and expedite the process of taking approvals

6.2. Comprehensive O&M for twenty (20) Operational Years shall be required for each of the Project.

6.3. Successful Bidder(s) shall be responsible for all the works related to Commissioning and operation for twenty (20) Operational Years of each Project. Procurer or MAHAPREIT shall not be responsible to pay or increase in tariff for any work related to Project except the cases where PPA requires additional payment.

6.4. Bidders are informed that their scope is limited to the LT (Low Tension) panel and supply and installation of generation and net meter. Any components beyond the LT panel are not within the bidder's scope and responsibility. Any cost which is beyond the LT panel, such as installing generating meter and net meter will be borne by the customer.

6.5. All other cost which is required for successful operation of the system should be borne by the RESCOs.

6.6. It is clarified that the Project(s) awarded under this RFP would not include energy storage with rooftop solar project. However, if Procurer(s) 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 RA L1 Tariff for sale of power under this RFP. Bidder has to declare the battery storage capacity to MAHAPREIT.

6.7. The bidder is required to furnish the Application Programming Interface (API) of their proprietary data logging software to MAHAPREIT for seamless integration into the overarching project monitoring software. This integration is essential for achieving comprehensive and real-time project monitoring. By providing the API, the bidder enables MAHAPREIT to efficiently aggregate and analyze data from the data logging software, contributing to effective project management and performance evaluation. The bidder is expected to facilitate the API integration process in a timely manner.

6.8. The detailed scope of work is provided in SCHEDULE-I of PPA.

SECTION VI: CHECKLIST

1. Checklist for online submission

No.	Particular	Format No.	Copy Attached	Page No.
1.	Covering Letter	1	Yes / No	
2.	Copy of tender fees Transaction Statement (Non-Refundable)	-	Yes / No	
3.	General Particulars	2	Yes / No	
4.	Bidder's composition and ownership structure (applicable for companies)	3	Yes / No	
5.	Bid Security, as applicable	4	Yes / No	
6.	Annexure-III: List of Project categories	-	Yes / No	
7.	Power of Attorney in favour of authorized signatory (*To be stamped on non – judicial stamp paper of Rs.500 of the state where the document is made*)	7	Yes / No	
8.	Board Resolution in support of power of attorney in favour of authorized signatory (applicable for companies)	-	Yes / No	
9.	Declaration for Eligibility Criteria Requirement (Financial)	8	Yes / No	
10.	Format for Certificate of Relationship in case of Affiliate (if applicable)	9	Yes / No	
11.	Certificate of Incorporation	-	Yes / No	
12.	Undertaking Form	10	Yes / No	
13.	Consortium Agreement (If applicable)	12	Yes / No	
14.	Declaration	14	Yes / No	
15.	Board Resolution/power of attorney in favour of Lead Bidder (if applicable)	13	Yes / No	
16.	Declaration	14	Yes / No	
17.	Undertaking	15	Yes / No	
18.	ALMM guidelines compliance declaration	16	Yes / No	
19	Turnover /Balance sheet	--	Yes / No	
20	Financial certificates CA certified	--	Yes / No	
21	Net worth certificates CA certified	---	Yes / No	

2. Checklist for original hard copy submission

Sr. No.	Particular	Format No.	Copy Attached	Page No.
1.	Covering letter	2	Yes/ No	
2.	Bid Security, as applicable in BG Form	4	Yes / No	
3.	Power of Attorney in favour of authorised signatory (*To be stamped on non – judicial stamp paper of Rs.500 of the state where the document is made*)	7	Yes / No	
4.	Board Resolution/power of attorney in favour of Lead Bidder (if applicable)	13	Yes / No	

SECTION VII: FORMATS FOR SUBMITTING RFP

FORMAT 1: COVERING LETTER

(The covering letter should be on the Letter Head with CIN No of the Bidder/ Lead Member of Consortium)

Ref.No._____ Date:_____

From: Insert name and address of Bidder)
Tel.:_____
E-mail:_____

To:_____
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.
5th floor, next to Trade centre,
Bandra Kurla Complex, Bandra East,
Mumbai, Maharashtra 400051

Sub: "Request for Proposal (RFP) for Tariff Discovery and Selection of Solar Power Developers for Implementation of an Aggregate Capacity of 500 MW, with a 50% 'GREENSHOE' Option, for Grid-Connected Rooftop Solar PV Projects under the RESCO Model, for Sale of Solar Power at Various MSME Units in the States of Maharashtra, Goa, Gujarat, Uttar Pradesh, and Andhra Pradesh"

Dear Sir,

We, the undersigned_____[insert name of the Bidder] having read, examined and understood in detail the Request for Proposal (RFP) for the discovery of lowest tariff for work of Design, Engineering, Finance, Supply, Installation, Testing and Commissioning Including Comprehensive O&M for twenty (20) Operational Years for Sale of Solar Power aggregating to about (in words) MW under RESCO Model at various MSMEs in the state of Maharashtra, Goa, Gujarat, Uttar Pradesh and Andhra Pradesh, India, hereby submit our Bid comprising of Financial Bid and Technical Bid. We confirm that neither we nor any of our Affiliate has submitted Bid other than this Bid directly or indirectly in response to the aforesaid RFP.

We give our unconditional acceptance to the RFP, dated and RFP attached thereto, issued by MAHAPREIT, as amended. As a token of our acceptance to the RFP, the same have been initiated by us and enclosed to the Bid. We shall ensure that we execute such RFP as per the provisions of the RFP and provisions of such RFP shall be binding on us.

Project Categories

We are pleased to submit our bid for the following Project Categories as mentioned in table below:

Project Category Number	Project Category Name	Bid capacity (MW)	Participation* (Yes / No)

**Note: Bidder shall mention 'Yes' corresponding to Project Categories it wants to bid and clearly mention 'No' for Project Categories where it does not intend to bid. In case of any empty cell, MAHAPREIT shall consider it as "No" intention of participation in that Project Category.*

Bid Security

We have enclosed Bid Security in form of RTGS / NEFT/ Bank Guarantee for concerned Project Category of amounts as per RFP, details of which are hereunder:

Project Category	Participation* (Yes / No)	Details of Bid Security

**Note: Bidder shall mention 'Yes' corresponding to Project Categories it wants to bid and clearly mention 'No' for Project Categories where it does not intend to bid. In case of any empty cell, MAHAPREIT shall consider it as "No" intention of participation in that Project Category.*

OR

We have enclosed a Bid Security as per prescribed format, subject to clause 4.14 as mentioned in this RFP.

We have submitted our Financial Bid strictly as per this RFP, without any deviations, conditions and without mentioning any assumptions or notes for the Financial Bid in the said format(s).

Acceptance

We hereby unconditionally and irrevocably agree and accept that the decision made by MAHAPREIT in respect of any matter regarding or arising out of the RFP shall be binding on us. We hereby expressly waive any and all claims in respect of Bid process.

We confirm that there are no litigations or disputes against us, which materially affect our ability to fulfil our obligations with regard to execution of projects of capacity offered.

Familiarity with Relevant Indian Laws & Regulations

We confirm that we have studied the provisions of the relevant Indian laws and regulations as required to enable us to submit this Bid and execute the RFP, in the event of our selection as Bidder. We further undertake and agree that all such factors as mentioned in RFP have been fully examined and considered while submitting the Bid.

We undertake that we have satisfied ourselves with the site conditions of the projects and our proposed financial bid takes into consideration the existing site conditions.

Contact Person

Details of the contact person are furnished as under:

Particulars	Description
Name	
Designation	
Company	
Address	
Phone Nos.	
Fax Nos.	
E-mail address	

We are enclosing herewith the hard copies of only necessary documents containing duly signed formats etc., as desired by you in the RFP for your consideration.

It is confirmed that our Bid is consistent with all the requirements of submission as stated in the RFP and subsequent communications from MAHAPREIT. The information submitted in our Bid is complete, strictly as per the requirements stipulated in the RFP and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our Bid. We confirm that all the terms and conditions of our Bid are valid for acceptance for a period of one hundred and eighty (180) Days from Bid Deadline. We confirm that we have not taken any deviation so as to be deemed non-responsive.

Dated the_____day of_____2025
Thanking you,
We remain,
Yours faithfully,
Name, Designation and Signature of Authorized Person in whose name Power of Attorney/Board Resolution.

FORMAT 2: GENERAL PARTICULARS OF THE BIDDER

1	Name of the Company	
2	Registered Office Address	
3	E-mail	
4	Web site	
5	Authorized Contact Person(s) with name, designation, Address and Mobile Phone No., E-mail address/ Fax No. to whom all references shall be made	
6	Year of Incorporation	
7	Have the Bidder/Company ever been debarred By any Govt. Dept. / undertaking for undertaking any work	
8	Reference of any documentation formation attached by the Bidder other than specified in the RFP.	
9	Whether the Bidder wishes to form a Project Company for execution of work	Yes/No
10	Bidder is listed in India	Yes/No
11	GSTIN No.*(Copy Enclosed)*	
14	PAN No. *(Copy Enclosed)*	
16	Certificate of Incorporation of Bidder/ Affiliate (as applicable) enclosed	Yes/No
17	Partnership deed for LLP/ Sole Proprietor registration (as applicable) enclosed	Yes/No

(Signature of Authorized Signatory)

With Stamp

FORMAT 3: SHAREHOLDING CERTIFICATE FOR COMPANY / PARTNER CONTRIBUTION IN A PARTNERSHIP FIRM

SHAREHOLDING CERTIFICATE FOR COMPANY

Name of the Equity holder	**Type and Number of shares owned**	**% of equity holding**	**Extent of Voting rights**

OR

PARTNER CONTRIBUTION IN A PARTNERSHIP FIRM

Name of Partner	**Capital Contribution (Rs)**	**% of** In the event that the Successful Bidder(s) declines or fails to execute the Power Purchase Agreement (PPA) for the Project(s) falling under a specific Project category for which the Letter of Award (LOA) has been duly accepted and signed, the Performance Bank Guarantee (PBG) submitted by the Successful Bidder(s) shall be forfeited and the said LOA shall stand annulled and/or cancelled in respect of the Project(s) so refused. Furthermore, the Successful Bidder(s) shall be liable to penalties for the rejection of the site(s) offered. The Earnest Money Deposit (EMD) submitted by the Bidder shall also be forfeited, and MAHAPREIT reserves the right to initiate appropriate legal action against the Bidder, as deemed fit. **in the Firm**

(Signature of Authorized Signatory) With Stamp

(Signature of Company Secretary/Director/Chartered Accountant)

FORMAT 4: FORMAT FOR BID SECURITY

(To be submitted separately for each Project Category)

(To be stamped on non – judicial stamp paper of minimum INR 500)

Ref._____Bank Guarantee No._____Date:_____

In consideration of the *[Insert name of the Bidder]* (hereinafter referred to as Bidder) submitting the response to RFP for Discovery of Tariff &Selection of Solar Power Developers Through Tender Process for Implementation 500 MW with 50% GREENSHOE option for Grid Connected Roof Top Solar PV Systems under RESCO Model at various MSMEs in the State of Maharashtra, Goa, Gujarat, Uttar Pradesh and Andhra Pradesh in response to the RFP No._____Dated _____issued by Mahatma Phule Renewable Energy & Infrastructure Technology Limited considering such response to the RFP of[insert the name of the Bidder] as per the terms of the RFP, the[insert name & address of bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to MAHAPREIT forthwith on demand in writing from MAHAPREIT or any Officer authorized by it in this behalf, any amount up-to and not exceeding Rupees [Insert amount] only, on behalf of M/s. [Insert name of the Bidder].

This guarantee shall be valid and binding on this Bank up to and including [insert date of validity in accordance with this RFP] and shall not be terminable by notice or any change in the constitution of the Bank or the term of Agreement or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective Agreement.

Our liability under this Guarantee is restricted to Rupees (Rupees only). Our Guarantee shall remain in force until [insert date of Bid Validity in accordance with this RFP]. Only MAHAPREIT shall be entitled to revoke this Guarantee till [Insert date which is 30 days after the date in the preceding sentence].

The Guarantor Bank hereby agrees and acknowledges that only the MAHAPREIT shall have a right to revoke 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 MAHAPREIT, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to MAHAPREIT.

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 MAHAPREIT to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank

have any recourse against MAHAPREIT 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 MAHAPREIT 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 MAHAPREIT or to exercise, levy or enforce any distress, diligence or other process against the Bidder.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rupees_____(Rupees_____only) and it shall remain in force until [Date to be inserted on the basis of this RFP] with an additional claim period of thirty (30) days thereafter.

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

_____

Power of Attorney No.

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

Date, this _____day of_____20_____

(Name and Signature of the Authorized Signatory)

FORMAT 5: FORMAT FOR PERFORMANCE BANK GUARANTEE

(To be stamped on non – judicial stamp paper of Value equivalent to 0.25% of Bank Guarantee amount or Rs 25,000 whichever is lower)

In consideration of the [Insert name of the Bidder] (hereinafter referred to as (Bidder) submitting the response to Request for Proposal (RFP) for Discovery of Tariff &Selection of Solar Power Developer for Implementation of 500 MW with 50% greenshoe option Grid Connected Roof Top Solar PV Projects for Sale of Solar Power aggregating to about __ MW under RESCO Model at various locations in the state of Maharashtra, Goa, Gujarat, Uttar Pradesh and Andhra Pradesh in response to the RFP dated _____issued by Mahatma Phule Renewable Energy & Infrastructure Technology Limited considering such response to the RFP of [insert the name of the RESCO] (which expression shall unless repugnant to the context or meaning thereof include its executers, administrators, successors and assignees) and selecting the Project of the RESCO and issuing Letter of Award (LOA) No. _____to (Insert Name of RESCO) as per terms of RFP and the same having been accepted by the selected Project Company, M/s {a Special Purpose Vehicle (SPV) formed for this purpose}, if applicable]. As per the terms of the RFP, the [insert name & address of bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to MAHAPREIT at [Insert Name of the Place from the address of the MAHAPREIT] forthwith on demand in writing from MAHAPREIT, or any officer authorized by it in this behalf, any amount upto and not exceeding Rupees _____[Rupees(Total Value in words)] only, on behalf of M/s [Insert name of the RESCO/ Project Company].This guarantee shall be valid and binding on this Bank up to and including _____and shall not be terminable by notice or any change in the constitution of the Bank or the term of Agreement or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective Agreement.

Our liability under this Guarantee is restricted to Rupees _____(both in numbers and words)

Our Guarantee shall remain in force until MAHAPREIT shall be entitled to invoke this Guarantee till_____. The Guarantor Bank hereby agrees and acknowledges that MAHAPREIT 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 MAHAPREIT, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to MAHAPREIT.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by [Insert name of the

RESCO. The Guarantor Bank shall not require MAHAPREIT to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against MAHAPREIT 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 MAHAPREIT shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the selected RESCO/ Project Company, to make any claim against or any demand on the RESCO or to give any notice to the RESCO/ Project Company or to enforce any security held by MAHAPREIT or to exercise, levy or enforce any distress, diligence or other process against the RESCO/ Project Company.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rupees_____(Rupees _____only) and it shall remain in force until we are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if MAHAPREIT serves upon us a written claim or demand.

_____
Signature
Name
Power of Attorney No.
For
[Insert Name of the Bank] Banker's Stamp and Full Address.
Dated this _____day of_____, 20_____

Witness:

_____
Signature
Name and Address

_____
Signature
Name and Address

FORMAT 6: CHECK LIST FOR PBG

S. No.	Details of checks	YES/NO
1	Is the Bank Guarantee on non-judicial Stamp paper of appropriate value, as per applicable Stamp Act of the place of execution	
2	Whether date, purpose of purchase of stamp paper and name of the purchaser are indicated on the back of Stamp paper under the Signature of Stamp vendor (The date of purchase of stamp paper should be not later than the date of execution of Bank Guarantee and the stamp paper should be purchased either in the name of the executing Bank or the party on whose behalf the Bank Guarantee has been issued. Also the Stamp Paper should not be older than six (6) Months from the date of execution of Bank Guarantee).	
3	Has the executing Officer of Bank Guarantee indicated his name, designation and Power of Attorney No./Signing Power no. on the Bank Guarantee?	
4	Is each page of Bank Guarantee duly signed / initialled by executant and whether stamp of Bank is affixed thereon? Whether the last page is signed with full particulars including two witnesses under seal of Bank as required in the prescribed Performa?	
5	Does the Bank Guarantees compare verbatim with the Performa prescribed in the Bid Documents?	
6	Are the factual details such as Bid Document No./Specification No., / LOI No. (if applicable) / Amount of Bank Guarantee and Validity of Bank Guarantee correctly mentioned in the Bank Guarantee	
7	Whether overwriting/cutting if any on the Bank Guarantee have been properly authenticated under signature & seal of executant?	

FORMAT 7: POWER OF ATTORNEY

(To be stamped on non – judicial stamp paper of Rs 500 of the state where the document is made)

Power of Attorney to be provided by the Bidder in favour of its representative as evidence of authorized signatory's authority.

Know all men by these presents, we (name and address of the registered office of the Bidder as applicable) do hereby constitute, appoint and authorize Mr./Ms. (name &residential address) who is presently employed with us and holding the position of _____as our true and lawful attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to submission of our Bid for Discovery of Tariff &Selection of Solar Power Developer for Implementation of Roof Top Solar PV Projects aggregating to about _____(in words) MW with 50% greenshoe option under RESCO Model at various locations in the state of Maharashtra, Goa, Gujarat, Uttar Pradesh and Andhra Pradesh in response to the RFP No _____Dated: issued by MAHAPREIT including signing and submission of the Bid and all other documents related to the Bid, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document which the MAHAPREIT may require us to submit. The aforesaid Attorney is further authorized for making representations to the Mahatma Phule Renewable Energy & Infrastructure Technology Limited and providing information / responses to MAHAPREIT representing us in all matters before MAHAPREIT and generally dealing with MAHAPREIT in all matters in connection with Bid till the completion of the bidding process as per the terms of the above mentioned in RFP.

We hereby agree to ratify all acts, deeds and things done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall be binding on us and shall always be deemed to have been done by us.

All the terms used herein but not defined shall have the meaning ascribed to such terms under the RFP.

_____

Signed by the within named

(Insert the name of the executant's company)

through the hand of

Mr _____

duly authorized by the Board to issue such Power of Attorney

Dated this_____day of_____

Accepted

_____

Signature of Attorney

(Name, designation and address of the Attorney) Attested

_____

(Signature of the executant)

(Name, designation and address of the executant)

_____

Signature and stamp of Notary of the place of execution

Common seal of has been affixed in my/our presence pursuant to Board of Director's Resolution dated

WITNESS

_____

(Signature)

Name _____

Designation _____

_____

(Signature)

Name_____

Designation_____

FORMAT 8: FINANCIAL ELIGIBILITY CRITERIA REQUIREMENT

(To be submitted on the letterhead with CIN no of Bidder/ Lead Member/ Member of Consortium)

To,

Mahatma Phule Renewable Energy & Infrastructure Technology Limited

_____

_____

Mumbai

Dear Sir,

Sub: "Request for Proposal (RFP) for Tariff Discovery and Selection of Solar Power Developers for Implementation of an Aggregate Capacity of 500 MW, with a 50% 'GREENSHOE' Option, for Grid-Connected Rooftop Solar PV Projects under the RESCO Model, for Sale of Solar Power at Various MSME Units in the States of Maharashtra, Goa, Gujarat, Uttar Pradesh, and Andhra Pradesh" in response to the RFP No: ……. Dated: …….

We submit our Bid for which details of our Financial Eligibility Criteria Requirements are as follows.

Net worth/Turnover of Indian Rupees_____Lakh computed as per instructions provided in this RFP based on unconsolidated audited annual accounts (refer Note-1 below). The relevant financial statement for respective years shall be enclosed, duly signed by authorized signatory.

Name of Entity being evaluated	Name of Affiliate in case its Financial Strength being used	Financial Year	Financial Criteria (fill as applicable) to be met as per	
			Net worth (INR Lakh)	Turnover (INR Lakh)

Note:

The bidders in case of "using affiliate's financial strength" shall declare in undertaking (Format-10) the criteria on which they fulfil the financial eligibility as per the provisions of this RFP.

Yours faithfully

_____

(Signature and stamp of Authorized Signatory of Bidder)

Name: _____

Date:_____

Place: _____

_____

(Signature and stamp (on each page) of Chartered Accountant/Statutory Auditors of Bidder along with UDIN no.

Name:_____

Date:_____

Place: _____

Attached are copies of the audited financial statements (balance sheets, including all related notes, and income statements) for the years required above complying with the following condition:

a. Must reflect the financial situation of the Bidder or a member of a Consortium, and not sister or parent companies;
b. Historic financial statements must be audited by a certified public accountant;
c. Historic financial statements must correspond to accounting periods already completed and audited. No statements for partial periods shall be accepted;
d. Should be submitted on the letter head of the public accountant.

Notes:

Audited consolidated annual accounts of the Bidder may also be used for the purpose of financial criteria provided the Bidder has at least 26% equity and control in each company whose accounts are merged in the audited consolidated accounts and provided further that the financial capability of such companies (of which accounts are being merged in the consolidated accounts) shall not be considered again for the purpose of evaluation of the Bid.

FORMAT 9: FORMAT FOR CERTIFICATE OF RELATIONSHIP OF AFFILIATE WITH THE BIDDER

To,

_____

Dear Sir,

"Request for Proposal (RFP) for Tariff Discovery and Selection of Solar Power Developers for Implementation of an Aggregate Capacity of 500 MW, with a 50% 'GREENSHOE' Option, for Grid-Connected Rooftop Solar PV Projects under the RESCO Model, for Sale of Solar Power at Various MSME Units in the States of Maharashtra, Goa, Gujarat, Uttar Pradesh, and Andhra Pradesh"

We hereby certify that M/s_____,M/s_____,M/s_____are the Affiliate(s) of the Bidder as per the definition of Affiliate as provided in this RFP and based on details of equity holding as on seven (7) Days prior to the Bid Deadline.

The details of equity holding of the Affiliate /Bidder or vice versa as on seven (7) Days prior to the Bid Deadline are given as below:

a) In case of Bidder being Company/ LLP/ Partnership Firm/ Sole – Proprietor:

Name of Company/ LLP/ Partnership Firm/ Sole – Proprietor	**Name of the Affiliate**	**Details of Equity Holding**

OR

b) In case of Bidder being member of the Consortium

Name of Member of Consortium	**Name of the Affiliate**	**Details of Equity Holding**

Yours Faithfully

_____

(Insert Name and Signature of Statutory Auditor or Company Secretary of the Bidder/ Member of Consortium)

FORMAT 10: UNDERTAKING FORM

Undertaking from Affiliate of Bidder/ Lead Member/ Member of Consortium

Name: _____

Full Address: _____

Telephone No.: E-mail address: Fax/No.:_____

To,

_____

Dear Sir,

We refer to the RFP No:_____Dated:_____ for Request for Proposal (RFP) for Discovery of Tariff &Selection of Solar Power Developer for Implementation of ---------- MW with 50% greenshoe option Grid Connected Roof Top Solar PV Systems for Sale of Solar Power under RESCO Model at various MSMEs in the State of Maharashtra, Goa, Gujarat, Uttar Pradesh and Andhra Pradesh

We have carefully read and examined in detail the RFP regarding submission of an undertaking, as per the prescribed Format of the RFP.

We confirm that M/s _____(Insert name of Bidder) is our Affiliate on the following basis:

that M/s (Insert name of Bidder) has been authorized by us to use our financial capability for meeting the Financial Eligibility as specified in the RFP referred to above in terms of Networth/Turnover.

We have also noted the amount of the Performance Guarantees required to be submitted as per the RFP by (Insert the name of the Bidder) in the event of it being selected as the RESCO.

In view of the above, we hereby undertake to you and confirm that in the event of failure of (Insert name of the Bidder) to submit the Performance Guarantees and Bid Security in full or in part at any stage, as specified in the RFP, we shall submit the Performance Guarantee and Bid Security not submitted by (Insert name of the Bidder)".

We also undertake that we shall maintain our relationship with M/s _____(insert name of bidder) so that it is in accordance with principles of 'Control' and 'Affiliate' laid out in RfP No._____Dated: _____for period of one (1)Year from COD, subject to provisions of Clause b). (in case of affiliate)

We have attached hereto certified true copy of the Board Resolution, whereby the Board of Directors of our Company has approved issue of this Undertaking by the Company.

All the terms used herein but not defined, shall have the meaning as ascribed to the said terms under the RFP.

_____

Signature of Chief Executive Officer/Managing Director

Common seal of has been affixed in my/our presence pursuan to Board of Director's

Resolution dated.

WITNESS

_____

(Signature)

Name: _____

Designation: _____

_____

(Signature)

Name: _____

Designation: _____

FORMAT 11: FORMAT FOR LETTER OF AWARD (LOA)

To, Date:
[Designation]
[Name of Company]
Address:
Sub:
Ref:

Dear Sir,

This is to inform you that you are declared as Successful Bidder against the RfP No._____ dated dd.mm.yyyy for execution of Project Category(), of capacity _____MW of solar rooftop projects under RESCO model for Implementation of (in words) MW with 50 greenshoe option Grid Connected Roof Top Solar PV Systems for Sale of Solar Power at various MSMEs in the State of Maharashtra, Goa, Gujarat, Uttar Pradesh and Andhra Pradesh

MAHAPREIT does hereby issues to M/s_____(Successful Bidder) the LOA to execute Design, Engineering, Finance, Supply, Installation, Testing and Commissioning, including Insurance, Warranty, Spare Parts and Operation & Maintenance of Grid Connected Rooftop Solar PV Projects for Sale of Solar Power under RESCO model as per scope of work, specifications and all terms and conditions mentioned in the RfP. Upon acceptance of this letter by the Successful Bidder, following conditions of the RfP would be applicable:

1. That, the "Successful Bidder" shall accept this LOA, sign and submit to MAHAPREIT, along with applicable administrative charges, within 15 days of issuance of this LOA.

2. That, the "Successful Bidder" has agreed to provide in-principle consent to Execute Work as per Scope, Specifications and all terms and conditions mentioned in the RFP No:_____Dated:_____issued by MAHAPREIT.

3. That, the "Successful Bidder" has also agreed to execute work on the rates already accepted / agreed upon as per L1 rate. The rates shown in discovered through tendering process for the sale of solar power is for the twenty Operational Year i.e. Rs _____per unit (kWh).

4. That, the Successful Bidder agrees to do a preliminary survey of Project site(s) in consultation with Procurer(s) to ascertain the Project Capacity before execution of PPA pursuant to a work order as relevant and necessary.

5. That, the Successful Bidder shall execute Power Purchase Agreement (PPA) with the Procurer and with co-signatories of the PPA on the date as notified by the MAHAPREIT. The Successful Bidder shall be responsible for all the works related to

Commissioning and operation for twenty (20) Operational Years of Project.

6. That, if the Successful Bidder wishes to form a Project Company, the same should be executed within forty-five (45) Days from the issuance of LOA. That principles laid down in Clause 4.5 of the RfP have to be followed while forming the Project Company.

7. That, the Successful Bidder shall submit PBG of an amount of INR five hundred (500) /kW or part thereof as prescribed in RfP/ PPA. However, Successful Bidder, at its sole discretion, has option to submit lump sum PBG for amount corresponding to total Project Capacity against Project Category(s) for which it is declared as Successful Bidder.

8. That, the Successful Bidder shall submit the applicable Administrative Charges i.e. INR lakh immediately with acceptance of LOA.

The parties agree that this Letter will be considered as a legal document and shall be considered until such time that the parties have executed relevant and applicable Power Purchase Agreement.

Please signify acceptance to this letter by signing it. We look forward to working with you.

Date: _____

Signature with Company Seal

Name:_____

Designation:_____

Regards,

For, MAHAPREIT

FORMAT 12: FORMAT FOR CONSORTIUM AGREEMENT

Joint Bidding/ Consortium Agreement Format for Participation in

"Request for Proposal (RFP)

For

Discovery of Tariff &Selection of Solar Power Developer

For

Design, Engineering, Supply, Finance, Installation, Testing and Commissioning Including Insurance, Warranty, Spare Parts and Operation & Maintenance of Grid Connected Roof Top Solar PV Projects with 50% greenshoe option for Sale of Solar Power under RESCO model at Various MSMEs in the State of Maharashtra, Goa, Gujarat, Uttar Pradesh and Andhra Pradesh

(To be stamped as per the stamp act of the state where the document is made)

THIS JOINT BIDDING AGREEMENT is entered into on this_____day of____.

AMONGST

{_____, party on First Part of consortium} and having its registered its registered office at _____(Hereinafter referred to as the **"First Part"** or **"Lead Member"** which expression shall, unless repugnant to the context include its successors and permitted assigns)

AND

_____ Having its registered office at _____.(Hereinafter referred to as the "**Second Part" or "Member"** which expression shall, unless repugnant to the context include its successors and permitted assigns)

AND

{[_____], party on Third Part of consortium} and having its registered office at _____. (Hereinafter referred to as the **"Third Part"** or **"Member"** which expression shall, unless repugnant to the context include its successors and permitted assigns)

The above-mentioned parties of the First, Second and Third Part are collectively referred to as the "**Parties**" and each is individually referred as a "**Party**"

WHERE AS,

i. Mahatma Phule Renewable Energy & Infrastructure Technology Limited (hereinafter referred to as the "MAHAPREIT" which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) has invited applications (the "Applications") by its RFP No: …….. Dated:for award of the rate contract/ work under "Discovery of Tariff &Selection of Solar Power Developer for Design, Engineering, Supply, Installation, Testing and Commissioning Including Insurance, Warranty, Spare Parts and Operation &Maintenance of Grid Connected Roof Top Solar PV Projects for Sale of Solar Power under RESCO model at Various Locations in the State of Maharashtra, Goa, Gujarat, Uttar Pradesh and Andhra Pradesh (hereinafter called "Project") and Selection of Solar Power Developer for the same.

ii. The Parties are interested in jointly bidding for the Project as members of consortium in accordance with the terms and conditions of the RFP document and other bid documents in respect of the Project, and

iii. It is a necessary condition under the RFP document that the members of the Consortium shall enter into a Consortium agreement and furnish a copy thereof with the Application.

NOW IT IS HEREBY AGREED as follows:

Definitions and Interpretations

In this agreement, the capitalized terms shall, unless the context otherwise require, have the Meaning ascribed thereto under the above-mentioned RFP.

1. Consortium

The Parties do hereby irrevocably constitute a consortium (the "**Consortium**") for the purposes of jointly participating in the Bidding Process. The Parties hereby undertake to participate in the Bidding Process in a Project Category as per Table 1 of this RFP, only through this Consortium and not individually and/ or through any other consortium constituted for this RFP, either directly or indirectly or through any of their Affiliate(s).

2. Role of the Parties

The Parties hereby undertake to perform the roles and responsibilities as described below:

a) The parties agree to submit bid as Consortium for following Project Categories:

Project Category	Participation* (Yes / No)

**Note: Bidder shall mention 'Yes' corresponding to Project Categories it wants to bid and clearly mention 'No' for Project Categories where it does not intend to bid*

b) Only First Part shall be evaluated for qualification against technical eligibility criteria as per RFP.

c) First Part shall have the power of attorney from all Parties for conducting all business for and on behalf of the Consortium during the Bidding Process and after its selection as Successful Bidder.

d) First Part would be responsible and obligated for successful execution of all work awarded to them by MAHAPREIT and in no circumstances the same shall be the responsibility of Second Part. Pursuant to selection of Successful Bidder as per criteria delineated in the RFP, all obligations as per RFP shall be borne by the First Part.

e) Second Part and Third part shall work in accordance with roles and responsibilities assigned to them by First Part as a part of their internal understanding.

f) Parties have agreed and documented clearly stated roles and responsibilities between First Part, Second Part and Third Part for execution of work awarded by MAHAPREIT.

g) Subject to the terms of this agreement, the share of each Member of the Consortium in the "issued equity share capital" shall be in the following proportion: (if applicable)

Name of Member	Proposed % Equity holding
Lead Member	……(not less than 51%)
Member	
Member	

3. Termination

This Agreement shall be effective from the date hereof and shall continue in full force and effect until the Bid Validity Period of Award and further in accordance with the LOA subsequently issued if bid arrives as successful. However, in case the Consortium is either not pre-qualified for the Project or does not get selected for Award of the work, the Agreement will stand terminated in case the Applicant is not pre- qualified.

4. Miscellaneous

This Joint Bidding Agreement shall be governed by laws of India. The Parties

acknowledge and accept that this Agreement shall not be amended by Parties without the prior written consent of the MAHAPREIT. Party of First Part would decide on the representative of Consortium at MAHAPREIT.

IN WITNESS WHERE OF 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:

(Signature)

(Name & Designation)

(Address)

In Presence of:

Witness -1

Witness -2

SIGNED, SEALED AND DELIVERED For and on behalf of Lead Member by:

(Signature)

(Name & Designation)

(Address)

In Presence of:

Witness -1

Witness -2

SIGNED, SEALED AND DELIVERED For and on behalf of Third Part:

(Signature)

(Name and Designation)

(Address)

In Presence of:

Witness -1

Witness -2

FORMAT 13: POWER OF ATTORNEY IN FAVOR OF LEAD MEMBER OF THE CONSORTIUM

(to be submitted by each member of the Consortium)

(To be stamped on non – judicial stamp paper of Rs.500 of the state where the document is made)

Whereas Mahatma Phule Renewable Energy & Infrastructure Technology Limited (MAHAPREIT) has invited applications (the "Applications") by its RFP No: …….. Dated:for Discovery of Tariff &Selection of Solar Power Developers for Implementation of Aggregate Capacity of XXX (X) MW with 50 greenshoe option Grid Connected Roof Top Solar PV Projects, for Sale of Solar Power under RESCO Model, at various MSMEs in the state of Maharashtra, Goa, Gujarat, Uttar Pradesh and Andhra Pradesh (hereinafter called "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 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 Unit(s) 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 authorize …… 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 Unit(s), 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 Units, 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 RUMSL, 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 Unit(s) 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.

IN WITNESS WHEREOF WE THE PRINCIPALS ABOVE NAMED HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS …… DAY OF ……, 20-----

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.

FORMAT 14: DECLARATION

(Required to be submitted by the Bidder on Original Letter Head with CIN No of company)

We have carefully and thoroughly read and comprehensively understood the Terms and Conditions of the RFP, its amendments/ corrigenda, pre-bid meeting minutes, PPA and other documents as a part of this RfP(collectively referred as "RfP documents") and unconditionally agree to abide by them and submit the Bid fully compliant with RfP documents without any deviation.

We declare that:

1. I/ We have carefully read and understood terms and conditions of RFP (RfP no. ____ / dated / /) and associated PPA and their corrigenda/ addenda/ amendments issued from time to time before bid submission end date (collectively called as "RfP Documents"). In case, at any stage of bidding process or after award of work, our bid or award of work is found non-compliant with any provisions of RfP Documents or any of our undertakings/ declarations are found wrong/ unsolicited/ misrepresented/ unfulfilled, we unconditionally declare and undertake to accept, without any responsibility/ accountability/ implications/ liabilities/ obligations on anyone other than us, decision of competent authority as appropriate, including rejection of our bid and/ or cancellation of award of work, without prejudice to any other rights that competent authority may be entitled to exercise as per law or under provisions of RfP documents

2. We have not been Black listed or otherwise for any Supply of Goods / Services / Works by any Ministry / Department / PSU of Central Government / Any of the State Government(s), anytime / anywhere in the Country Debarred or have failed to execute any previous work of MAHAPREIT.

3. We solemnly undertake that the responsibility of execution of the Work as per the terms and conditions of the RFP/ Contract Agreement shall be entirely ours.

4. We declare that we have not taken any support from any of the independent Consultant or Consulting Agency who is associated with MAHAPREIT in any form while preparing RFP.

If this Declaration is found to be incorrect or if any RFP Condition is found violated by us, then without prejudice to any other conditions, action would be initiated against us _____(Name of bidder) as deemed fit necessary by MAHAPREIT, including blacklisting or debarment as necessary.

(Signature of Authorized Signatory)

(Name & Designation in block letters)

FORMAT 15: UNDERTAKING

(Required to be submitted by the Bidder on Original Letter Head of company)

I/We have carefully read and understood the enclosed Terms and Conditions of the (RfP no._____/__dated / /) and associated PPA and their corrigenda/ addenda/ amendments issued from time to time before bid submission end date (collectively called as “RfP Documents”) and agree to abide by them without any deviation. Further,

1. I/We declare that there has been no instances at any point of time where were have not performed satisfactorily in the Work Order(s) of MAHAPREIT, leading to cancellation of Work Order(s) of value more than or equal to five percent (5%) of cumulative value of Work Order(s) awarded in last five (5) Years.

2. I/We declare that I/we am/are not involved in litigation or arbitration with MAHAPREIT arising out of work completed or under execution by it, of value more than or equal to five percent (5%) of cumulative value of Work Order(s) awarded to them in last five (5) Years.

If this Declaration is found to be incorrect or if any RFP Condition is found violated by us, then without prejudice to any other conditions, action would be initiated against us _____(Name of bidder) as deemed fit necessary by MAHAPREIT.

(Signature of Authorized Signatory)

(Name & Designation in block letters)

FORMAT 16: UNDERTAKING for ALMM GUIDELINES

(Required to be submitted by the Bidder on Original Letter Head of company)

I/We have carefully read and understood the enclosed Terms and Conditions of the RFP and agree to abide by them.

I/We declare to abide by the Ministry of New and Renewable Energy's ALMM guidelines and any other amendment made thereto.

If this Declaration is found to be incorrect or if any RFP Condition is found violated by us, then without prejudice to any other conditions, action would be initiated against us _____(Name of bidder) as deemed fit necessary by MAHAPREIT.

(Signature of Authorized Signatory)

(Name & Designation in block letters)

FORMAT 17: FINANCIAL BID FORMAT

Financial Bid for A1, A2 A3 and A4 Project Category

(To be submitted only online with due encryption)

Subject: "Request for Proposal (RFP) for Tariff Discovery and Selection of Solar Power Developers for Implementation of an Aggregate Capacity of 500 MW, with a 50% 'GREENSHOE' Option, for Grid-Connected Rooftop Solar PV Projects under the RESCO Model, for Sale of Solar Power at Various MSME Units in the States of Maharashtra, Goa, Gujarat, Uttar Pradesh, and Andhra Pradesh"

Category / Rate INR/kWh / State	A1 MSMEs having sanctioned demand from 20 kW to 100 kW (INR/kWh)	A2 MSMEs having sanctioned demand from 101 kW to 250 kW (INR/kWh)	A3 MSMEs having sanctioned demand from 251 kW to 1000 kW (INR/kWh)	A4 MSMEs having sanctioned demand above 1000 kW (INR/kWh)
MAHARASHTRA				
GUJRAT				
GOA				
ANDHRA PARADESH				
UTTER PARADESH				

Note:

1. Quoted Tariff must be applicable for sale of Solar Power to Procurer from Initial Part Commissioning to the end of twenty Operational Year. Bidder to provide the Quoted Tariff up to 3 decimal places.

2. The above Quoted 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 be passed on by the Power Producer to the Procurer and vice versa under appropriate provisions of change in law.

3. Further, for clarification, PPA shall be signed for individual Projects under Project Category but Quoted Tariff shall remain the same for all Projects under Project Category. However, it shall be applicable in accordance with respective dates of part commissioning/ full COD, as the case may be.

SEAL AND SIGN

AUTHORIZED SIGNATORY

ANNEXURE–I: PROGRESS REPORT FORMAT

S. No	Beneficiary Name	Project Category	District	Name of RESCO	Estimated Capacity	LOC Signing Date (F)	PBG Submission Date	PBG Validity End Date	PPA Signing date (H)	Approved Capacity	Date on which application was file
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

ANNEXURE - III:

NOT APPLICABLE

ANNEXURE – IV: MNRE Benchmark Costs for FY 2021-22

No. 32/24/2020-SPV Division
Government of India
Ministry of New & Renewable Energy
***

Block No. 14, CGO Complex, Lodhi Road,
New Delhi, Dated 27th October 2021

ORDER

Subject: Amendment in Benchmark costs for Grid-connected Rooftop Solar PV systems for the financial year 2021-22 -reg.

Vide Order no 318/38/2018-GCRT dated 18.08.2021 dated 18.08.2021, benchmark costs including taxes, were issued for FY 2021-22 by the Ministry. Subsequently, applicable Goods & Services Tax (GST) rates have been revised by GST Council for identified renewable energy equipment. In order to address the recent changes in GST rates and also any further changes in GST rates in future, it has been decided to issue benchmark costs excluding GST. For the purpose of calculating CFA available under MNRE Scheme, applicable GST rates may be added to these benchmark costs. Accordingly, undersigned is directed to convey the approval of competent authority for issuing the benchmark costs, excluding GST, for Grid-connected Rooftop Solar PV systems applicable for MNRE Scheme for the year 2021-22. Rooftop solar system capacity-wise benchmark costs are given below:

(A) For General Category States/ UTs:

RTS System Capacity range	Up to 1 kW	> 1 kW upto 2 kW	>2kW Upto 3kW	> 3kW upto 10 kW	>10 kW upto 100 kW	>100 kW upto 500 kW
Benchmark cost (Rs./kW) excluding GST	46923	43140	42020	40991	38236	35886

(B) For Other State/UTs (i.e North-Eastern States including Sikkim, Himachal Pradesh, Uttarakhand, Jammu & Kashmir, Ladakh, Andaman and Nicobar and Lakshadweep islands):

System Capacity range	Up to 1 kW	> 1 kW upto 2 kW	>2kW Upto 3kW	> 3kW upto 10 kW	>10 kW upto 100 kW	>100 kW upto 500 kW
Benchmark cost (Rs./kW) excluding GST	51616	47447	46216	45087	42056	39467

2. Above mentioned amendments in benchmark costs are effective from the 18.08.2021. All other terms and conditions mentioned in the Order dated 18.08.2021 remain unchanged, i.e. the date of issuance of original Order for benchmark costs for FY 2021-22.

(Hiren Chandra Borah)
Scientist-D

To

All Concerned

Page 1 of 1

ANNEXURE – V: TECHNICAL SPECIFICATIONS

Following indicative technical specifications are provided to bidders to enable them to quote for the RESCO projects:

1. **Components/Package of Grid Connected Rooftop Solar PV System for bidding:** The bidders shall quote their price considering complete package essentially covering - "design, supply, erection, testing and commissioning including warranty and comprehensive operation & maintenance of grid-connected rooftop solar PV plant during the PPA period. For the purpose of this tender, the components of a Grid Connected Rooftop Solar PV System shall essentially comprise but not be limited to crystalline solar PV Panels/ modules of required number, Inverters/ PCU, total Cable/ wiring up to 150 m in length, cable conduits, required array junction boxes, DC distribution box, AC distribution box, various connectors, nut-bolts, civil and mechanical works, Protection-Earthing, lightning, surges, drawing & manual and other miscellaneous works. The quote shall also be inclusive of all taxes, duties.

   The minimum required standard specifications of each component are provided herewith:

2. **Solar photovoltaic modules:**
   a. The PV modules used must conform to the ALMM list issued from time to time. A letter/ evidence in this regard shall be produced on request.
   b. The PV modules used 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.
   c. The PV modules used must qualify to the latest edition of IEC PV module qualification test or equivalent BIS standards Thin-Film Solar Cell Modules IEC 61215/IS14286.
   d. For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC 61701.
   e. Protective devices against surges at the PV module shall be provided. Low voltage drop bypass diodes shall be provided.
   f. PV modules must be tested and approved by one of the IEC authorized test centers.
   g. The module frame shall be made of corrosion resistant materials, preferably having anodized aluminium.
   h. The bidder shall carefully design & accommodate requisite numbers of the modules to achieve the rated power in his bid.
   i. Other general requirement for the PV modules and subsystems shall be the following:

- The rated output power of any supplied module shall have positive tolerance in the range of 5 watt.
- 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.

j. 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 bypass 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.

k. I-V curves at STC should be provided by the bidder.

2.1. Modules deployed must use a RF identification tag. The following information must be mentioned in the RFID used on each module. This should be inside the laminate only.

i. Name of the manufacturer of the PV module
ii. Name of the manufacturer of Solar Cells.
iii. Month & year of the manufacture (separate for solar cells and modules)
iv. Country of origin (separately for solar cells and module)
v. I-V curve for the module Wattage, Im, Vm and FF for the module
vi. Unique Serial No and Model No of the module
vii. Date and year of obtaining IEC PV module qualification certificate.
viii. Name of the test lab issuing IEC certificate.
ix. Other relevant information on traceability of solar cells and module as per ISO 9001 and ISO 14001

2.2. Warranties:

2.2.1. Material Warranty:

a. 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 not less than five (05) years from the date of sale to the original customer ("Customer")
b. Defects and/or failures due to manufacturing
c. Defects and/or failures due to quality of materials
d. 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 repair or replace the solar module(s), at the Owner's sole option.

2.2.2. Performance Warranty:

The predicted electrical degradation of power generated not exceeding 20% of the minimum rated power over the 20-year period and not more than 10% after ten years period of the full rated original output

3. **Module Mounting structure:**

Rooftop structure detailed specifications:

The Rooftop Structures maybe classified in three broad categories as follows

3.1. **Ballast structure**

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

3.2. **Tin shed**

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

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

3.3.1. **Minimum Ground clearance (300MM – 1000 MM)**

a. The structure shall be designed to allow easy replacement of any module and shall be in line with site requirement. The gap between module should be minimum 30MM.
b. Base Plate – Base plate thickness of the Structure should be 5MM for this segment.
c. Column – Structure Column should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
d. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 70MM in Web side (y-axis) and 40MM in flange side (x-axis).
e. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 60MM in Web side and 40MM in flange side in Lip section.
f. Front/back bracing – The section for bracing part should be minimum 2MM thickness.
g. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting

fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.

h. For single portrait structure the minimum ground clearance should be 500MM.

3.3.2. Medium Ground clearance (1000MM – 2000 MM)

a. Base Plate – Base plate thickness of the Structure should be Minimum 6MM for this segment.

b. Column – Structure Column should be minimum 2MM in Lip section / 3MM in C- Channel section. The minimum section should be 80MM in Web side and 50MM in flange side in Lip section.

c. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.

d. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.

e. Front/back bracing – The section for bracing part should be minimum 2MM thickness.

f. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.

3.3.3. Maximum Ground clearance (2000MM – 3000 MM)

a. Base Plate – Base plate thickness of the Structure should be minimum 8 MM for this segment.

b. Column – Structure Column thickness should be minimum 2.6MM in square hollow section (minimum 50x50) or rectangular hollow section (minimum 60x40) or 3MM in C-Channel section.

c. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in Channel section. The minimum section should be 80MM in Web side and 50MM in flange side in Lip section.

d. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 80MM in Web side and 50MM in flange side in Lip section.

e. Front/back bracing – The section for bracing part should be minimum 3MM thickness.

f. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.

3.3.4. Super elevated structure (More than 3000 MM)

I. Base structure

a. Base Plate – Base plate thickness of the Structure should be 10MM for this segment.

b. Column – Structure Column minimum thickness should be minimum 2.9MM in square hollow section (minimum 60x60) or rectangular hollow section (minimum 80x40).

c. Rafter - Structure Rafter minimum thickness should be minimum 2.9MM in square hollow section (minimum 60x60) or rectangular hollow section (minimum 80x40).

d. Cross bracing – Bracing for the connection of rafter and column should be of minimum thickness of 4mm L-angle with the help of minimum bolt diameter of 10mm.

II. Upper structure of super elevated structure –

a. Base Plate – Base plate thickness of the Structure should be minimum 5MM for this segment.

b. Column – Structure Column should be minimum 2MM in Lip section / 3MM in Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.

c. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.

d. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 60MM in Web side and 40MM in flange side in Lip section.

e. Front/back bracing – The section for bracing part should be minimum 2MM thickness.

f. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.

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

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

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

a. If penetration on the roof is allowed (based on the client requirement) then

minimum 12MM diameter anchor fasteners with minimum length 100MM can be use with proper chipping. The minimum RCC size should be 400x400x300 cubic mm. Material grade of foundation should be minimum M20.

b. If penetration on roof is not allowed, then foundation can be done with the help of 'J Bolt' (refer IS 5624 for foundation hardware). Proper Neto bond solution should be used to adhere the Foundation block with the RCC roof. Foundation J - bolt length should be minimum 12MM diameter and length should be minimum 300MM.

3.3.5. Material standards:

i. Design of foundation for mounting the structure should be as per defined standards which clearly states the Load Bearing Capacity & other relevant parameters for foundation design (As per IS 6403 / 456 / 4091 / 875).

ii. Grade of raw material to be used for mounting the structures so that it complies the defined wind loading conditions (As per IS 875 - III) should be referred as follows (IS 2062 – for angles and channels, IS 1079 – for sheet, IS 1161 & 1239 for round pipes, IS 4923 for rectangular and square hollow section)

iii. Test reports for the raw material should be as per IS 1852 / 808 / 2062 / 1079 / 811.

iv. In process inspection report as per approved drawing & tolerance should be as per IS 7215.

v. For ascertaining proper welding of structure part following should be referred:
   a. D.P. Test (Pin Hole / Crack) (IS 822)
   b. Weld wire grade should be of grade (ER 70 S - 6)

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

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

IS 5624

3..3.6. Design Validation- The Structure design and drawing should be duly verified by a licensed Structural designer before installation for all types of structure arrangements including the extension made if any.

4. Junction boxes (JBs)

a. The junction boxes are to be provided in the PV array for terminationof connecting cables. The J. Boxes (JBs) shall be made of GRP/FRP/Powder Coated Aluminum
/cast aluminum alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JBs shall be such that input & output termination can be made through suitable cable glands.
b. Copper bus bars/terminal blocks housed in the junction box with suitable terminationthreads Conforming to IP65 standard and IEC 62208 Hinged door with EPDM rubber gasket to prevent water entry. Single / double compression cable glands. Provision of earthings. It should be placed at 5 charget height or above for ease of accessibility.
c. 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.
d. 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.
e. All fuses shall have DIN rail mountable fuse holders and shall be housed in thermoplastic IP 65 enclosures with transparent covers.

5. DC Distribution Board:

a. DC Distribution panel to receive the DC output from the array field.
b. 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. MCB shall be used for currents up to 63 Amperes, and MCCB shall be used for currents greater than 63 Amperes.

6. AC Distribution panel board:

i. 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.
ii. All switches and the circuit breakers, connectors should conform to IEC 60947, part I, II and III/ IS60947 part I, II and III.
iii. The changeover switches, cabling work should be undertaken by the bidder as part of the project.
iv. 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.
v. The panels shall be designed for minimum expected ambient temperature of 45 degree Celsius, 80 percent humidity and dusty weather.
vi. All indoor panels will have protection of IP54 or better. All outdoor panels will have protection of IP65 or better.
vii. Should conform to Indian Electricity Act and rules (till last amendment).

viii. All the 415 V AC or 230 V AC 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	+/- 5 Hz

7. PCU/Array Size Ratio:

a. The combined wattage of all inverters should not be less than rated capacity of power plant under STC.

b. Maximum power point tracker shall be integrated in the PCU/inverter to maximize energy drawn from the array.

8. **PCU/ Inverter:**

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 system 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 power conditioning unit/inverter should also be DG set interactive 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	+/- 5 Hz
Ambient temperature considered	-20 oC to 50 oC
Humidity	95 % Non-condensing

Protection of Enclosure	IP-54(Minimum) for indoor
	IP-65(Minimum) for outdoor
Grid Frequency Tolerance range	+/- 5 Hz
Grid Voltage tolerance	-0.2 to 0.15
No-load losses	Less than 1% of rated power
Inverter efficiency(minimum)	>93% (In case of 10 kW or above with inbuilt galvanic isolation) >97% (In case of 10 kW or above without in- built galvanic isolation)
Inverter efficiency (minimum)	> 90% (In case of less than 10 kW)
THD	< 3%
PF	> 0.9

a. Three phase PCU/ inverter shall be used with each power plant system (10 kW and/or above) but in case of less than 10 kW single phase inverter can be used.
b. PCU/inverter shall be capable of complete automatic operation including wakeup, synchronization & shutdown.
c. 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 chargeder line and against the lightning on chargeder.
d. Built-in meter and data logger to monitor plant performance through external computer shall be provided.
e. Anti-islanding (Protection against Islanding of grid): The PCU shall have anti islanding protection in conformity to IEEE 1547/UL 1741/IEC 62116 or equivalent BIS standard.
f. Successful Bidders shall be responsible for limiting dc injection into the grid and load as per CEA/State regulations.
g. The PCU/ inverter generated harmonics, flicker, DC injection limits, Voltage Range, Frequency Range and Anti-Islanding measures at the point of connection to the utility services should follow the latest CEA (Technical Standards for Connectivity Distribution Generation Resources) Guidelines.
h. 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.
i. The MPPT units environmental testing should qualify IEC 60068-2 (1, 2, 14, 30)/

Equivalent BIS std. The junction boxes/ enclosures should be IP 65 (for outdoor)/ IP 54 (indoor) and as per IEC 529 specifications.

j. 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.

9. Integration of PV Power with grid:

The output power from SPV would be fed to the inverters which converts DC produced by SPV array to AC and chargeds it into the main electricity grid after synchronization. In case of grid failure, or low or high voltage, solar PV system shall be out of synchronization and shall be disconnected from the grid. Once the DG set comes into service, PV system shall again be synchronized 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.

10. Transformer "If required" & metering:

a. Dry/oil type relevant kVA, 11 kV/415 V, 50 Hz Step up along with all protections, switchgears, Vacuum circuit breakers, cables etc. along with required civil work, as per applicable IS or IEC standard.

b. The bidirectional electronic energy meter (0.5 S class) shall be installed for the measurement of import/Export of energy.

c. The bidder must take approval/NOC from the Concerned DISCOM for the connectivity, technical feasibility, and synchronization of SPV plant with distribution network and submit the same to DISCOM before commissioning of SPV plant.

d. Reverse power relay shall be provided by bidder (if necessary), as per the local DISCOM requirement.

11. Power consumption:

Regarding the generated power consumption, priority need to give for internal consumption first and thereafter any excess power can be exported to grid. Guidelines of appropriate authority like DISCOM, state regulator may be followed.

12. Protections:

The system should be provided with all necessary protections like earthing, Lightning, and grid islanding as follows:

12.1 Lightning Protection

The SPV power plants shall be provided with lightning & overvoltage protection. 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 NFC 17-102:201/IEC 62305 standard. The protection against induced high-voltages shall be provided by the use of SPD (type II) and suitable earthing such that induced transients find an alternate route to earth. The current carrying cable from lightning arrestor to the earth pit should have sufficient current carrying capacity according to IEC 62305. According to standard, the minimum requirement for a lightning protection system designed for class of LPS III is a 6 mm2 copper/ 16 mm2 aluminum or GI strip bearing size 25*3 mm thick). Separate pipe for running earth wires of Lightning Arrestor shall be used.

12.2 Surge protection

Internal surge protection shall consist of three SPD type-II, surge-arrestors connected from +ve and –ve terminals to earth (via Y arrangement).

12.3 Earthing protection

a. Each array structure of the PV yard should be grounded/ earthed properly as per IS:3043-2018. In addition, the lighting arrester/masts should also be earthed inside the array field. Earth Resistance shall be tested in presence of the representative of MSEDCL as and when required after earthing by calibrated earth tester. PCU, ACDB and DCDB should also be earthed properly.

b. 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.

c. All metal casing/ shielding of the plant shall be thoroughly grounded in accordance with CEA Safety Regulation 2010. In addition, the lightning arrester/masts should also be earthed inside the array field.

d. For 10 KW and above systems, separate three earth pits shall be provided for individual three earthings viz.: DC side earthing, AC side Earthing and Lightning arrestor earthing.

13. Grid islanding:

a. 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 charged power into small sections of the grid, known as “Islands.” Powered Islands present a risk to workers who may expect the area to be unpowered, and they may also damage grid-tied equipment. The Rooftop PV system shall be equipped with islanding protection. In addition to disconnection from the grid (due to islanding protection) disconnection due to under and over voltage conditions shall also be provided.

b. A manual disconnect 4-pole isolation switch beside 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.

14. Cables

Cables of appropriate size to be used in the system shall have the following characteristics:

i. Shall meet IEC 60227/IS 694, IEC 60502/IS1554 standards
ii. Temp. Range: –10°C to +80°C
iii. Voltage rating 660 V/1000 V
iv. Excellent resistance to heat, cold, water, oil, abrasion, UV radiation
v. Flexible
vi. 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 solar system to the minimum (2%)
vii. For the DC cabling, XLPE or, XLPO insulated and sheathed, UV-stabilized single core multi-stranded flexible copper cables shall be used; Multi-core cables shall not be used.
viii. For the AC cabling, PVC or, XLPE insulated and PVC sheathed single or, multicore multi-stranded flexible copper/Aluminum cables shall be used; Outdoor AC cables shall have a UV-stabilized outer sheath.
ix. The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use. Outer sheath of cables shall be electron beam crosslinked XLPO type and black in color.
x. The DC cables from the SPV module array shall run through a UV-stabilized PVC conduit pipe of adequate diameter with a minimum wall thickness of 1.5 mm.
xi. Cables and wires used for the interconnection of solar PV modules shall be provided with solar PV connectors (MC4) and couplers
xii. All cables and conduit pipes shall be clamped to the rooftop, walls and ceilings with thermo-plastic clamps at intervals not exceeding 50 cm; the minimum DC cable size shall be 4.0 mm2 copper; the minimum AC cable size shall be 4.0 mm2 copper. In three phase systems, the size of the neutral wire size shall be equal or half to the size of the phase wires.
xiii. 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. In addition, cable drum no. / Batch no. to be embossed/ printed at every one meter.
xiv. Cable Jacket should also be electron beam cross-linked XLPO, flame retardant, UV resistant and black in color.
xv. All cables and connectors for use for installation of solar field must be of solar grade which can withstand harsh environment conditions including High temperatures, UV radiation, rain, humidity, dirt, salt, burial and attack by moss and microbes for 25 years and voltages as per latest IECstandards. DC cables used from solar modules to array junction box shall be solar grade copper (Cu) with XLPO insulation and rated for 1.1 kV as per relevant standards only.
xvi. The ratings givenare approximate. Bidder to indicate size and length as per

system design requirement. All the cables required for the plant shall be provided by the bidder. Any change in cabling sizes if desired by the bidder shall be approved after citing appropriate reasons. All cable schedules/ layout drawings shall be approved prior to installation.

xvii. Multi Strand, Annealed high conductivity copper conductor PVC type 'A' pressure extruded insulation or XLPE insulation. Overall PVC/XLPE insulation for UV protection Armoured 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.

xviii. The total voltage drop on the cable segments from the solar PV modules to the solar grid inverter shall not exceed 2.0 %.

xix. The total voltage drop on the cable segments from the solar grid inverter to the building distribution board shall not exceed 2.0 %

15. Connectivity

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 been suggested for selection of voltage level in the distribution system for ready reference of the solar suppliers.

Plant Capacity	**Connecting voltage**
Up to 10 kW	240 V-single phase or 415 V - three phases at the option of the consumer
Above 10 kW and up to 100 kW	415 V - three phases
Above 100 kW	At HT/EHT level (11 kV/33 kV/66 kV) as per DISCOM rules

a. The maximum permissible capacity for rooftop shall as prescribed by the MERC's net-metering policy from time to time.

b. Utilities may have voltage levels other than above, DISCOMS may be consulted before finalization of the voltage level and specificationbe made accordingly.

c. For large PV system (Above 100 kW) for industrial installation having large load, the solar power can be generated at low voltage levels and stepped up to 11 kV level through the step-up transformer. The transformers and associated switchgear would require to be provided by the SPV bidders.

16. Danger boards and signages:

Danger boards should be provided as and where necessary as per IE Act. /IE rules

as amended up to date. Three signage shall be provided one each at battery –cum control room, solar array area and main entry from administrative block.

17. Planning and designing:

The bidder should carry out Shadow Analysis at the site and accordingly design strings & arrays layout considering optimal usage of space, material and labour. Solar PV system on the rooftop for meeting the annual energy requirement The Solar PV system on the rooftop of the selected buildings will be installed for meeting up to 100% of the committed energy requirements depending upon the area of rooftop available and the remaining energy requirement of the office buildings will be met by drawing power from grid at industrial tariff of DISCOMs.

18. Safety measures:

The bidder 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.

19. Standards

Please refer to the table below for IEC standards to be mandatorily adhered.

Solar PV Modules/Panels	
IS 14286 (Part 1): 2021 / IEC 61215-1: 2021	Crystalline Silicon Terrestrial Photovoltaic (PV) modules (Si wafer based)Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval Part 1: Test Requirements
IS 14286 (Part 2): 2021 / IEC 61215-2: 2021	Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval Part 2: Test Procedures
IS 14286 (Part 1-1): 2021 / IEC 61215-1-1: 2021	Special requirements for testing crystalline silicon modules
IS/IEC 61730-1: 2016	Photovoltaic (PV) Module Safety Qualification Part 1: Requirements for Construction
IS/IEC 61730-2: 2016	Photovoltaic (PV) Module Safety Qualification Part 2: Requirements for Testing
IS 14286 (Part 1): 2021 / IEC 61215-1: 2021	Thin-Film Terrestrial Photovoltaic (PV) modules (CdTe, GaAs, Si, etc.) Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval Part 1: Test Requirements

IS 14286 (Part 2): 2021 / IEC 61215-2: 2021	Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval Part 2: Test Procedures
IS 14286 (Part 1-2): 2021 / IEC 61215-1-2: 2021	Special requirements for testing thin-film modules
IS/IEC 61730-1: 2016	Photovoltaic (PV) Module Safety Qualification Part 1: Requirements for Construction
IS/IEC 61730-2: 2016	Photovoltaic (PV) Module Safety Qualification Part 2: Requirements for Testing
Solar PV Inverters	
IS 16221 (Part 1): 2022 /IEC 62109-1 2010, IEC 62109-2 2011	Safety of power converters for use in photovoltaic power systems – Part 1: General requirements, and Safety of power converters for use in photovoltaic power systems Part 2: Particular requirements for inverters. Safety compliance (Protection degree IP 65 for outdoor mounting, IP 54 for indoor mounting)
IEC/IS 61683 1999(as applicable)	Photovoltaic Systems- Power conditioners: Procedure for Measuring Efficiency (10%, 25%, 50%, 75% & 90-100% Loading Conditions)
IEC 62116/UL 1741/ IEEE 1547 (as applicable)	Utility-interconnected Photovoltaic Inverters- Test Procedure of Islanding Prevention Measures
IEC 60255-27	Measuring relays and protection equipment- Part 27: Product safety requirements
IEC 60068-2/ IEC 62093 (as applicable)	Environmental Testing of PV System- Power Conditioners and Inverters
Fuses	

IS/IEC 60947 (Part 1, 2 & 3), EN 50521	General safety requirements for connectors, switches, circuit breakers (AC/DC): a) Low-voltage Switchgear and Control-gear, Part 1: General rules b) Low-Voltage Switchgear and Control-gear, Part 2: Circuit Breakers c) Low-voltage switchgear and Control-gear, Part 3: Switches, disconnectors, switch-disconnectors and fuse- combination units d) EN 50521: Connectors for photovoltaic systems – Safety requirements and tests
IEC 60269-6	Low-voltage fuses - Part 6: Supplementary requirements for fuselinks for the protection of solar photovoltaic energy systems
Surge Arrestors	
BFC 17-102:2011	Lightening Protection Standard
IEC 60364-5-53/ IS 15086-5 (SPD)	Electrical installations of buildings - Part 5-53: Selection and erection of electrical equipment - Isolation, switching and control
IEC 61643-11:2011	Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods
Cables	
IEC 60227/IS 694, IEC 60502/IS 1554 (Part 1 & 2)/ IEC69947 (as applicable)	General test and measuring method for PVC (Polyvinyl chloride) insulated cables (for working voltages up to and including 1100 V, and UV resistant for outdoor installation)
BS EN 50618	Electric cables for photovoltaic systems (BT(DE/NOT)258), mainly for DC Cables
Earthing /Lightning	
IEC 62561 Series (Chemical earthing) (as applicable)	IEC 62561-1 Lightning protection system components (LPSC) - Part 1: Requirements for connection components IEC 62561-2 Lightning protection system components (LPSC) - Part 2: Requirements for conductors and earth electrodes IEC 62561-7 Lightning protection system components (LPSC) - Part 7: Requirements for earthing enhancing compounds

Junction Boxes	
IEC 60529	Junction boxes and solar panel terminal boxes shall be of the thermoplastic type with IP 65 protection for outdoor use, and IP 54 protection for indoor use
Energy Meter	
IS 16444 or as specified by the DISCOMs	A.C. Static direct connected watt-hour Smart Meter Class 1 and 2- Specification (with Import & Export/Net energy measurements)
Solar PV Roof Mounting Structure	
IS 2062/IS 4759	Material for the structure mounting