

BIDDING DOCUMENT

FOR

EMPANELMENT OF VENDORS

FOR

DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING INCLUDING WARRANTY, COMPREHENSIVE OPERATION & MAINTENANCE OF GRID-CONNECTED ROOFTOP SOLAR PLANT OF VARIOUS CAPACITIES UNDER THE PHASE-II OF GRID CONNECTED ROOFTOP SOLAR SCHEME OF MNRE IN THE STATE OF ODISHA

RFP No. – TPCODL/P&S/1000000163/2021-22



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INDEX

| Section No. | Contents | Page No. |
|---|--|----------|
| 1 | Interpretations | 4 |
| 2 | Disclaimer | 5 |
| 3 | Notice Inviting Tender | 6 |
| 4 | Scope of Work | 8 |
| 5 | Bid Information Sheet | 11 |
| 6 | Definitions and Abbreviations | 14-22 |
| Section – I | A: Introduction, Bid details and instructions to the Bidders B: Conditions of Contract | 23-53 |
| Section – II | Evaluation Criteria and CFA Disbursement | 54-62 |
| Section –III | Technical Specifications | 63 – 77 |
| Section – IV Price Bid (To be submitted online only) | | |
| Format A | Price Bid Format | 78 |
| Section – V Formats for Submitting RFP & Checklist | | |
| Format-1 | Covering Letter | 82 |
| Format-2 | General Particulars of the bidder | 84 |
| Format-3 | Bid Security Declaration | 85 |
| Format-4 | Format for Performance Bank Guarantee | 86 |
| Format-5 | Check List for Bank Guarantees | 88 |
| Format-7 | Financial Eligibility Criteria requirement | 89 |
| Format-8 | Format for Certificate of Relationship of Parent Company or Affiliate with the Bidding Company | 91 |
| Format-9 | Undertaking from the Financially Evaluated Entity or its Parent Company/ Ultimate Parent Company | 92 |
| Format-10 | Consortium Agreement | 94 |
| Format-11 | Share Holding certificate | 96 |
| Section –VI Annexure (A to X) | | |
| Annexure A | Documents required for Project Sanction | 98 |
| Annexure C | Guidelines for O&M | 99 |

| | | |
|-------------------|---|-----|
| Annexure D | Sanction Request letter | 104 |
| Annexure E | Quality Certification, Standards and Testing for Grid-connected Rooftop Solar PV Systems/Power Plants | 106 |
| Annexure F | Project Report Format | 109 |
| Annexure G | Declaration for Authorization | 110 |
| Annexure H | O&M Report Format | 111 |
| Annexure I | Format Tax Invoice | 113 |
| Annexure J | Project Completion Report for Grid-Connected Rooftop | 114 |
| Annexure K | Documents Against Completion of Project | 117 |
| Annexure L | Vendor/ Customer Registration form | 118 |
| Annexure M | CFA Claim Letter format | 120 |
| Annexure N | Indemnity Bond | 121 |
| Annexure O | Joint Inspection Report | 123 |
| Annexure Q | Typical Parameters of Dashboard | 124 |
| Annexure R | Check List for Offline Documents | 125 |
| Annexure S | Check List for Online Documents | 126 |
| Annexure T | ALMM Declaration Format | 127 |
| Annexure U | Standard Operating Procedure (SOP) for Installation and Metering Connection | 128 |
| Annexure V | Format for Bid Security Declaration | 129 |
| Annexure W | Undertaking/Self- Declaration for domestic content requirement fulfilment | 130 |
| Annexure Y | Format of agreement between vendor and consumer for additional cost due to desired customization | 131 |

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 contract 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 contract, they shall be interpreted in a harmonious manner so as to give effect to each part.
5. The table of contents and any headings or sub-headings in the contract has been inserted for case of reference only & shall not affect the interpretation of this agreement.
6. Implementing Agency denotes the four DISCOMs of Odisha (i.e. TPCODL, TPNODL, TPSODL, and TPWODL) in their respective supply areas.

Disclaimer

1. Though adequate care has been taken while preparing the RFP document, 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 any Bidder within fifteen (15) days from the date of notification of RFP/ Issue of the RFP document, it shall be considered that the RFP document is complete in all respects and has been received by the Bidder.
2. TPCODL reserves the right to modify, amend or supplement this RFP document.
3. While this RFP has been prepared in good faith, neither TPCODL nor their employees make any representation or warranty, express or implied, or accept any responsibility or liability, whatsoever, in respect of any statements 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.

Place: _____

Date: _____

NOTICE INVITING TENDER

FOR

EMPANELMENT OF VENDORS FOR “DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING INCLUDING WARRANTY, COMPREHENSIVE OPERATION & MAINTENANCE OF GRID-CONNECTED ROOFTOP SOLAR PLANT OF VARIOUS CAPACITIES UNDER PHASE-II OF GCRTS SCHEME OF MNRE BEING IMPLEMENTED IN THE STATE OF ODISHA

The Ministry of New and Renewable Energy, Government of India (MNRE) is implementing Phase-II of Grid Connected Rooftop Solar (GCRTS) Programme wherein central financial assistance (CFA) is being provided for installation of rooftop solar (RTS) projects in residential buildings. To implement the RTS activities in respect of the aforesaid programme, respective Power Distribution companies (DISCOMs) have been designated as the implementing agency. TPCODL is authorised to execute the tendering process for RTS Phase-II programme in all four Odisha Discoms on behalf of TPCODL, TPNODL, TPSODL and TPWODL.

TPCODL will identify L-1 rates and empanel vendors for implementation of the programme. The respective DISCOMs will execute RTS projects in their operational areas through the empanelled vendors, in accordance with the rates discovered in this tender.

TPCODL invites e-bids from eligible bidders to participate in Request for Selection (RFS) for empanelment of vendors for Site Survey, Design, Installation, Supply, Erection, Testing and Commissioning including Warranty and 5 years of Comprehensive Operation and Maintenance of Roof Top Solar PV Power System for Residential Consumers in the state of Odisha. This RFS shall be governed by terms of sanction received from MNRE vide notification 318/331/2017 dated 20.08.2019 and subsequent amendments.

For the implementation of above-mentioned work, Bidders should submit their bid proposal online, complete in all aspect, on or before Last date of Bid Submission as mentioned on the Bid Information Sheet.

Bidder shall submit bid proposal along with non-refundable bid processing fee and refundable Bid Bond as per the Bid Information Sheet. Techno-Commercial bids will be opened online as per the Bid Information Sheet in presence of authorized representatives of bidders who wish to be present online. Bid proposals received without the prescribed bid processing fees and Bid Bond shall automatically be rejected. In the event of any date mentioned in bid information is declared a Holiday, the next working day shall become operative for the respective purpose mentioned herein.

Bid documents, which include Eligibility criteria, “Technical Specifications”, various conditions of contract, formats, etc., can be downloaded from <https://www.tpcentralodisha.com/>. Only the documents submitted at the time of Bid Submission shall be used in evaluation process. Bidders are advised to ensure that all supporting documents are submitted at the time of Bid Submission, as no further clarification/amendments would be entertained in this regard. Bidders are also encouraged to familiarize themselves with the MNRE scheme available at SPIN portal (solarrooftop.gov.in) for efficient execution.

Any amendment(s)/ corrigendum/ clarifications with respect to this Bid shall be uploaded on above website.

The bidding process under this Rooftop scheme is for **20 MWp** on CAPEX Model.

| S. No. | DISCOM | Allocated Capacity | Description | Proposed Capacity | | | | | |
|--------|--------|--------------------|-----------------------------------|-------------------|--------|--------|---------------------|-----------------------|------------------------|
| | | | | Part-A | Part-B | Part-C | Part-D | Part-E | Part-F |
| | | | | 1 kW | 2 kW | 3 kW | Above 3 kW to 10 kW | Above 10 kW to 100 kW | Above 100 kW to 500 kW |
| 1 | TPCODL | 5000 KW | Tentative Aggregate Capacity (kW) | 1000 | 700 | 800 | 750 | 750 | 1000 |
| 3 | TPSODL | 5000 KW | Tentative Aggregate Capacity (kW) | 1500 | 1250 | 1000 | 750 | 500 | 0 |
| 5 | TPNODL | 5000 KW | Tentative Aggregate Capacity (kW) | 1000 | 700 | 800 | 750 | 750 | 1000 |
| 7 | TPWODL | 5000 KW | Tentative Aggregate Capacity (kW) | 1000 | 750 | 1500 | 1250 | 500 | 0 |

Note:

1. The minimum bidding capacity in each Part is 100KW
2. The final allocation of capacity in each part will be decided by each Implementing agency based upon the bid proposals received and to accommodate the full allocated capacity by MNRE.
3. For common facilities in Group Housing Societies/Residential Welfare Associations (GHS/RWA) etc. the allowed RTS capacity shall be limited up to 500 kWp (@ 10 kWp per house), with the upper limit being inclusive of individual rooftop plants already installed by individual residents in that GHS/RWA at the time of installation. Bidders are requested to quote Minimum Capacities in each part as per above table.
4. Implementing Agency reserves the right for diversion of capacity from one bidder/ category to another (including transfer of unallocated capacity to OPEN Category) for 100% utilization of capacity sanctioned by MNRE, GoI.

SCOPE OF WORK:

TPCODL invites bids for empanelment of firms for Design, supply, erection, testing and commissioning including warranty, comprehensive operation & maintenance for a period of 05 years of Grid connected Rooftop solar plants of various capacities in the State of ODISHA under CAPEX model.

TPCODL will empanel eligible vendors participating in this empanelment process and wish to provide their services on the price/rate discovered through transparent bidding process. The CFA available from MNRE would be limited to 40% of the prevailing Benchmark Cost or Discovered Rate, whichever is lower, for project capacity up to 3 kW. For project capacity above 3 kW and up to 10 kW, the available CFA would be 20% of the prevailing Benchmark Cost or Discovered Rate, whichever is lower. Group Housing Societies/Residential Welfare Associations (GHS/RWA) etc. are allowed to install RTS projects up to 500 kW capacity (@ 10 kWp per house), with the upper limit being inclusive of individual rooftop plants already installed by individual residents in that GHS/RWA at the time of installation of RTS for common activity.

TPCODL will not be responsible in case any empanelled vendors do not get any work order. The consumers under this scheme shall be free to install their projects from any empanelled vendors subject to the condition that project shall have to be installed/commissioned as per the MNRE Phase-II Guidelines and subsequent amendments.

The empanelled vendors will carry out the design, supply, erection, testing and commissioning including warranty, comprehensive operation & maintenance for a period of 05 years for CAPEX Model of grid interactive rooftop solar PV power plant and shall make all necessary arrangement for evacuation and injection of surplus power to the grid at the interconnection point/ points as agreed with DISCOMs.

1. The detailed Scope of Work for empanelled vendors shall essentially cover but not be limited to:

- 1.1. Identification of prospective beneficiaries and providing necessary assistance to the prospective beneficiary in submitting online applications for installation of RTS project.
- 1.2. Preparation of Detailed Project Report (DPR) of the proposed Proposal of Rooftop Solar Power Plant.
- 1.3. Obtaining Net-metering approval from concerned DISCOM/designated agency for providing grid connectivity/net-metering.
- 1.4. Submission of proposal with all required documents to Implementing Agency for sanctioning of the project.
- 1.5. Execution of the work shall be carried out in an approved manner as per the technical specification of RFP. In case of any dispute, relevant MNRE/BIS/ISI/NABL/ISO/IEC/IS specification shall be followed and work shall be carried out to the reasonable satisfaction of the engineer in charge.
- 1.6. The vendor shall complete the work of Design, supply, civil work, erection, testing and commissioning of SPV grid connected Power Plant within 6 months from the issuance of the sanction letter or 24 Months from date of sanction Order from MNRE to DISCOM, whichever is earlier. In event of failure to install and commission the RTS system within the mentioned timeframe, the entire Performance Bank Guarantee will be forfeited and may lead to

disqualification of the vendor at the sole discretion of Implementing Agency. The penalty for non-completion will be on pro-rata basis.

- 1.7. The work covers Design, supply, installation, commissioning and Comprehensive Maintenance Contract (CMC) for 05 (Five) Years.
- 1.8. Empanelled vendors shall establish a service centre to cater the 05 Years CMC. In case if it is not economically viable for an individual vendor then Group of vendors can establish a common service centre. The details of all such service centres (address, contact no. etc.) will be made available on the website of the Implementing Agency.
- 1.9. All the material required for the installation of solar power plant as per the work order issued shall be kept at site in custody of the vendor; Implementing Agency shall not be responsible for any loss or damage of any material during the installation. The vendor shall be responsible and take an insurance policy for transit-cum-storage-erection for all the materials.
- 1.10. The vendor shall take entire responsibility of electrical safety of the installations including connectivity with the grid and follow all the safety rules and regulations applicable as per Indian Electricity Act-2003 and prevailing CEA guidelines and amendments, it shall be responsibility of the vendor to take NOC from concerned authority and engage person as per provisions as per in CEA Rules and Regulations. The Empanelled vendor shall ensure proper safety of all the workmen, material, plants and equipment belonging to him/her. In case any accident occurs during the construction / erection or during guarantee period for work undertaken by Empanelled Vendor thereby causing any minor or major or fatal accident will be the responsibility of the Empanelled Vendor. The successful Vendors shall follow and comply with the employer's safety rules relevant provisions of applicable laws pertaining to the safety of workmen, employees, plant and equipment. The Empanelled vendors shall also arrange all certificates and test reports of the module and inverter and other equipment. The Empanelled Vendors must adhere to the Operation and Maintenance procedure given in **Annexure-C** of this document.
- 1.11. **The CFA claims of the systems installed and commissioned shall be processed with following documents:**
 - 1.11.1 Dated Claim letter from the bidder on its letter head certifying that the SPV Modules and Cells deployed in the systems installed are Indian Made (DCR Undertaking as prescribed MNRE Format as **Annexure-W**), and all the technical specifications of the components supplied and installed are in accordance with the specifications given in this document and adhere to MNRE requirement and all the information / documents provided along with the claim letter are correct and factual.
 - 1.11.2 Invoice of the System billed to the beneficiary.
 - 1.11.3 Photograph of the system with placard held by the beneficiary and representative of Implementing Agency showing the name of the beneficiary, Implementing Agency registration number and system capacity.
 - 1.11.4 Certificate of the beneficiary that the system is installed and commissioned in all respect with the date of commissioning, system and inverter capacity, etc. and that he has been provided the 05 (Five) Year Warranty Card and the O&M Manual.

- 1.11.5 Overwritten certificates/ documents shall be out rightly rejected and will not be processed for CFA payment.
- 1.11.6 Self-certified copies of documents will be submitted in support of claims made by the Empanelled Vendors.
- 1.11.7 The CFA shall be released subject to availability and release of funds from MNRE, GoI to Implementing Agency.
- 1.11.8 Third party Inspection may also be carried for disbursement of CFA. Third party Inspection will be carried out by the Agency nominated by MNRE or Implementing Agency.

Bid Information Sheet

| S. No | DISCOM | Proposed Capacity | | | | | |
|---------------------------------|--------|-------------------|-------------|-------------|---------------------|-----------------------|------------------------|
| | | Part-A | Part-B | Part-C | Part-D | Part-E | Part-F |
| | | 1 kW | 2 kW | 3 kW | Above 3 kW to 10 kW | Above 10 kW to 100 kW | Above 100 kW to 500 kW |
| 1 | TPCODL | 1000 | 700 | 800 | 750 | 750 | 1000 |
| 2 | TPSODL | 1500 | 1250 | 1000 | 750 | 500 | 0 |
| 3 | TPNODL | 1000 | 700 | 800 | 750 | 750 | 1000 |
| 4 | TPWODL | 1000 | 750 | 1500 | 1250 | 500 | 0 |
| Total Aggregate Capacity | | 4500 | 3400 | 4100 | 3500 | 2500 | 2000 |

The bidding process under this Rooftop scheme is for 20 MWp comprising of Part A, B, C, D, E & F. Tentative aggregate capacity under respective Part and DISCOMs are mentioned below:

Bidder can bid for PART-A or PART-B or Part-C or PART-D or PART-E or PART-F as per the eligibility criterion of RFP. Bidders can also bid combination of parts under CAPEX Model and for all Six (06) parts subject to meeting the eligibility criterion set forth herewith.

The minimum bidding capacity in each Part is 100KW

RFP No. – TPCODL/P&S/100000163/2021-22

| | |
|--|---|
| Broad Scope | <p>Identification of rooftops/beneficiaries, Design, Engineering, Manufacture, Supply, Storage, Civil work, Erection, Testing & Commissioning of the Grid-connected rooftop solar PV project including comprehensive Operation and Maintenance (O&M) of the project for a period of 05 years for CAPEX Model after commissioning of project.</p> <p>Total timeline for the above Scope of Work up to Commissioning of project is 20 Months from the date of the Empanelment Letter or 24 months from dated of MNRE Sanction to Implementing Agency i.e 19/01/2022 whichever is earlier.</p> |
| Downloading of RFP document | <p>The Bid Document can be downloaded from the TPCODL Website from https://www.tpcentralodisha.com/</p> |
| Pre-Bid Conference/ Clarification meeting | <p>Date: 22nd February 2022 Time: 11:00 AM Microsoft Teams meeting (Online): https://teams.microsoft.com/l/meetup-join/19:meeting_OWUzZjI0ZjQtYzI0Mi00MzA4LWI3YWYtODQ3MjQ5ODI3YjA1@t?hread.v2/0?context=%7B%22Tid%22:%22c185e9a-6fc0-438e-8cba-817a4d4c6ebb%22,%22Oid%22:%22a4123f5f-6e72-4fe6-9dd4-66b1ffc00c7%22%7D</p> |
| Submission of Tender Fee | <p>Last Date for submission of Tender Fee will be on 25th February 2022, 15:00 Hrs. After submission of tender fee the details of transactional, need to be sent to arijeet.choudhury@tpcentralodisha.com with copy to imran.ahmad@tpcentralodisha.com before last date and time for payment of Tender Fee.</p> <p>ARIBA link shall only be shared with bidders who will submit tender fee within the due timeline.</p> |
| Online Bid submission Deadline | <p>Date: 11th March 2022 Time: 15:00 Hrs</p> |
| Physical submission of documents | <p>No Physical Submission, Only Online Submission.</p> |
| Validity of Bid | <p>Validity of bid shall be minimum 06 months from the date of techno-commercial bid opening date</p> |
| Validity of Price | <p>20 months after the date of issuance of Empanelment Letter or 24 months from 19/01/2022, whichever is earlier.</p> |
| Tender Fee (In favour of TP Central Odisha Distribution Limited (Non-refundable)) | <p>Rs. 5000 (Including GST)*.</p> <p>Non-Refundable Tender Fee, as indicated in table above, to be submitted in the form of Direct Deposit in the following bank account and submit the receipt along with a covering letter clearly indicating the Tender Reference/ Enquiry Number –</p> <p>Beneficiary Name – TP Central Odisha Distribution Ltd. Bank Name – STATE BANK OF INDIA Branch Name – IDCO Towers, Bhubaneswar Address – PO- Sahidnagar, Janapath, Bhubaneswar. Branch Code – 7891</p> |

RFP No. – TPCODL/P&S/1000000163/2021-22

| | |
|---|--|
| | Account No – 10835304915 IFSC Code – SBIN0007891 *MSMEs registered in the State of Odisha shall pay tender fee of Rs. 1,000/- including GST. |
| Bid Bond/EMD | Rs. 2,00,000 (Including GST)**. ** EMD shall be exempted for MSME registered in the State of Odisha. However, Bidder shall be barred to participate in the tendering process for a period of 2 years in case it backs out post award of the contract. MSME BA needs to submit Bid Security Declaration as per the attached format. |
| Bid Process | ARIBA link shall only be shared with bidders who will submit tender fee within the due timeline. Bidders are requested to submit their offer in line with this Tender document. TPCODL shall respond to the clarification raised by various bidders and the replies will be sent to all participating bidders through TPCODL e-tender system (Ariba). |
| Name, Designation, Address and other details of Tender Inviting Authority | Name: Mr. Arijeet Choudhury Designation: Procurement (Commercial Services) Contact No.: 9871432126 E-Mail ID: arijeet.choudhury@tpcentralodisha.com |
| Important Note: Prospective bidders are requested to remain updated for any notices/amendments/clarifications etc. to the RFP document through the website: https://www.tpcentralodisha.com/ . No separate notifications will be issued for such notices/ amendments/ clarification etc. in the print media or individually. All the information related to this RFP shall be updated on the website. | |

DEFINITIONS

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

- 1.1 **“Affiliate”** shall mean a company that either directly or indirectly;
- (a) controls or
 - (b) is controlled by or
 - (c) is under common control with

A Bidding Company and “control” means ownership by one company of at least twenty six percent (26%) of the voting rights of the other company.

- 1.2 **“Beneficiary” or “Customer”** shall mean the residential category Consumers of Government owned or private DISCOMs, Distribution Licensee in Odisha for 1-phase / 3-phase connection of Supply of Electricity
- 1.3 **“Bid”** shall mean the Techno Commercial and Price Bid submitted by the Bidder along with all documents/credentials/attachment’s annexure etc., in response to this RFP, in accordance with the terms and conditions hereof.
- 1.4 **“Bidder”** shall mean Bidding Company/ Bidding consortium submitting the Bid. Any reference to the Bidder includes Bidding Company / Bidding consortium / consortium, members of a bidding consortium including its successors, executors and permitted assigns and lead member of the bidding consortium jointly and severally, as the context may require”.
- 1.5 **“Bidding Company”** shall refer to such single company that has submitted the response in accordance with the provisions of this RFP.
- 1.6 **“Bidding consortium or consortium”** shall refer to a group of companies that have collectively submitted the response in accordance with the provisions of this RFP.
- 1.7 **“Bid Bond”** shall mean the unconditional and irrevocable bank guarantee to be submitted along with the Bid by the Bidder under Clause of this RFP, in the prescribed Format;
- 1.8 **“Bid Deadline”** shall mean the last date and time for submission of Bid in response to this RFP as specified in Bid information Sheet;
- 1.9 **“Bid Capacity”** shall means capacity offered by the bidder in his Bid under invitation.
- 1.10 **“CAPEX”** CAPEX Model.
- 1.11 **“CEA”** shall mean Central Electricity Authority.

- 1.12 **“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;
- 1.13 **“Competent Authority”** shall mean Chairman and Managing Director (CMD)/Managing Director (MD)/CEO of Implementing Agency himself and/or a person or group of persons nominated by CMD/MD/CEO for the mentioned purpose herein;
- 1.14 **“Contract”** shall mean the agreement to be entered into by the DISCOM with the Empanelled Agency upon receiving the Letter of Empanelment from DISCOM for implementation of the Scheme/ Project and shall include the General and commercial terms & condition, scope of work, project requirement, technical conditions, schedules, appendixes, drawings and any other conditions specifically agreed between the parties forming a part of the contract.
- 1.15 **“Commissioning”** shall mean successful installation and grid-integration of the Solar Power Project by the Contractor, as defined in RFP.
- 1.16 **“Company”** shall mean a body incorporated in India under the Companies Act, 1956 or Companies Act, 2013, including any amendment there to.
- 1.17 **“Capacity Utilization Factor”** (CUF) means the ratio of the annual output of the plant in kWh versus installed plant capacity for number of days.
- CUF = plant output in kWh / (installed plant capacity in kW * 365 * 24).**
- 1.18 **“Circle”** means Operation and Maintenance Circles of DISCOM.
- 1.19 **“DNI”** shall means Direct Normal Irradiation.
- 1.20 **“Date of completion of project”** shall mean that the date of completion of project with project handed over and accepted by the consumer applicant in all respect provided that the assignees, Guarantee and warranty of 05 years shall be applicable as per the RFP Document terms and condition after the date of completion of Project.
- 1.21 **“Division”** Shall mean Operation and Maintenance Division of DISCOMs.
- 1.22 **“Eligibility Criteria”** shall mean the Eligibility Criteria as set forth in **Clause 5.5** of this RFP.
- 1.23 **“EMD”** shall mean Earnest Money Deposit which is required to be Paid as per the prevailing terms and conditions of RFP.
- 1.24 **“Empanelled Vendor(s) / Contractor / Project Developers(s)”** shall mean the Bidder(s) selected by TPCODL pursuant to this RFP

- 1.25 **“EPC”** Shall mean Engineering, Procurement and commissioning of the complete project as per the terms and condition of the RFP Document.
- 1.26 **“Financially Evaluated Entity”** shall mean the company which has been evaluated for the satisfaction of the Financial Eligibility Criteria.
- 1.27 **“Financial Year”** or **“FY”** shall mean the Period starting from 1 April of the first calendar year to 31 March of the consecutive calendar year.
- 1.28 **“Inter-connection point / Delivery / Metering Point”** shall mean the point at distribution voltage level where the power from the solar power Project is injected. Metering shall be done at this interconnection point where the power is injected into the Distribution System i.e. the Delivery Point. For interconnection with grid and metering, the EPC shall abide by Odisha Net Metering Regulations and their amendments thereof.
- 1.29 Implementing Agency denotes the four DISCOMs of Odisha (i.e. TPCODL/TPNODL/ TPSODL/TPWODL) in their respective supply areas.
- 1.30 **“kWp”** shall mean Kilo-Watt Peak.
- 1.31 **“kWh”** shall mean Kilo-Watthour.
- 1.32 **“Letter of Intent”** or **“LOI”** shall mean the letter issued Implementing Agency to the Selected Bidder to secure their Intent for award of the Project.
- 1.33 **“Limited Liability Partnership (LLP)”** shall mean Limited Liability Partnership as per Limited Liability Partnership Act 2008.
- 1.34 **“LOA”** shall mean the letter issued by Implementing Agency to the selected Bidder for Award of Work.
- 1.35 **“MNRE”** shall mean Ministry of New and Renewable Energy, Government of India.
- 1.36 **“Maximum Bid Capacity”** shall mean the maximum capacity for which the Bidder can submit its Bid against each Part/ Category.
- 1.37 **“Model”** shall mean CAPEX Model.
- 1.38 **“Net Meter”** means an appropriate energy meter capable of recording both import and export of electricity or a pair of meters one each for recording the net import and net export of electricity as the case may be.
- 1.39 **“O&M”** shall mean Operation & Maintenance of Rooftop Solar PV System for a period of 05 years for CAPEX Model.

- 1.40 **“Project”** Shall mean the project of the Design, Supply, Installation, testing & Commissioning of Grid connected Rooftop Solar Systems including five years comprehensive maintenance
- 1.41 **“Project Cost / Project Price”** shall mean the price offered by the Bidder for the Scope of work as per RFP document.
- 1.42 **“Project capacity”** means Capacity in kW allocated to the Bidder for various locations within the state of Implementing Agency.
- 1.43 **“Performance Ratio”** (PR) means “Performance Ratio” (PR) means the ratio of plant output versus installed plant capacity at any instance with respect to the radiation measured.
- PR= (Measured output in kW /Installed Plant capacity in kW * (1000 W/m2/Measured radiation intensity in W/m2).*
- 1.44 **“Parent Company”** shall mean a company that holds at least twenty six percent (26%) of the paid-up equity capital directly or indirectly in the Bidding Company as the case may be.
- 1.45 **“Project Sanction Documents”** shall mean the documents required for sanction of project.
- 1.46 **“Price Bid”** shall mean *Envelope II: Price Bid* of the Bid, containing the Bidder’s quoted Price as per this RFP;
- 1.47 **“Project Cost”** shall mean the Cost offered by the bidder for the scope of work as per the RFP document.
- 1.48 **“PV System” or “SPV ” or “ SPV System”** shall for the purpose of this tender mean the Grid-connected Rooftop Solar Photo-Voltaic (PV) system including the PV modules, grid-connected inverter(s), module mounting structure(s), cables and connectors, safety and Earthing equipment, interconnection equipment, and inverter with remote monitoring with other components for Rooftop Solar System that shall be supplied, installed, commissioned and maintained by the Empanelled Agency.
- 1.49 **“Qualified Bidder”** shall mean the Bidder(s) who, after evaluation of their Techno Commercial Bid stand qualified for opening and evaluation of their Price Bid;
- 1.50 **“RFP”** shall mean Request for Proposals (RFP) /Bid Document/ Tender Document.
- 1.52 **“Rooftop Owner”** shall means owner of roofs at various locations within the state of Odisha consisting of single or multiple rooftops.
- 1.53 **“Consent Letter”** shall mean the letter provided by Implementing Agency for a single or group of PV systems after the approval of the project sanction documents submitted by the contractor.

- 1.54 **“Scheme”** shall mean Phase-II Grid Connected Rooftop Solar Scheme for Providing Grid-connected Rooftop Solar System for Residential Consumers announced by the Ministry of New and Renewable and Renewable Energy, Government of India.
- 1.55 **“Statutory Auditor”** shall mean the auditor of a Company appointed under the provisions of the Companies Act, 1956 or under the provisions of any other applicable governing law.
- 1.56 **“SNA”** shall mean State Nodal Agency.
- 1.57 **“Solar Power Developer (SPD)”** shall mean Empanelled Vendor(s) to whom the project is/are allocated.
- 1.58 **“Specification”** shall mean the RFP Document forming a part of the contract along with Proforma, schedules, appendixes and Annexures.
- 1.59 **“Sub-Division”** shall mean Operation and Maintenance Sub-Division of DISCOM.
- 1.60 **“Central Financial Assistance (CFA)”** shall mean subsidy to be provided by MNRE under the ambit of Phase-II Rooftop Solar Scheme.
- 1.61 **“System”** shall mean the Grid connected Rooftop Solar System as per RFP Document that shall be supplied, installed, commissioned and maintained with all other ancillary required by the vendor for satisfactory operation of the System.
- 1.61 **“Tendered Capacity”** shall mean the Total aggregate capacity in kW indicated by the Vendors through this bidding process as per terms and conditions specified therein.
- 1.63 **“Ultimate Parent Company”** shall mean a company which directly or indirectly owns at least twenty six percent (26%) paid up equity capital in the Bidding Company) and/or in the Financially Evaluated Entity and such Bidding Company and /or the Financially Evaluated Entity shall be under the direct control or indirectly under the common control of such company.
- 1.64 **“Wp”** shall mean Watt Peak.
- 1.65 **“Week”** shall mean the continuous period of seven days.

| Abbreviations | |
|----------------------|---|
| Abbreviations | Full Forms |
| DSC | Digital Signature Certificate |
| AC | Alternating Current |
| ACDB | Alternating Current Distribution Board |
| Ah | Ampere-hour |
| ALMM | Approved List of Models and Manufacturers |
| BA | Business Associate (Bidder) |
| BOQ | Bill of Quantity |
| BIS | Bureau of Indian Standards |
| CCA | Controller of Certifying Authorities |
| CEA | Central Electricity Authority |
| CFA | Central Financial Assistance |
| CEI | Chief Electrical Inspector |
| CMC | Comprehensive Maintenance Contract |
| EP | Empanelled Partner |
| CUF | Capacity Utilization Factor |
| DC | Direct Current |
| DCDB | DC Distribution Board |
| DPR | Detailed Project Report |
| DG | Diesel Generator |
| DISCOM | Distribution Company |
| DPB | Distribution Panel Board |
| DSP | Digital Signal Processor |
| EMC | Electromagnetic Compatibility |
| EMD | Earnest Money Deposit |
| EMI | Electromagnetic Interference |
| EN | European Norms |
| EOI | Expression of Interest |
| EPDM | Ethylene Propylene Diene Monomers |
| FF | Fill Factor |

| | |
|---------|---|
| FOR | Freight on Rail/Road |
| FRP | Fibre-reinforced plastic |
| GHI | Global Horizontal Irradiance |
| GHS | Group Housing Society |
| GI | Galvanised Iron |
| GPRS | General Packet Radio Service |
| GPS | Global Positioning System |
| GRP | Glass Reinforced Plastic |
| GST | Goods and Services Tax |
| HDPE | High Density Polythylene |
| Hz | Hertz |
| IEC | International Electrotechnical Commission |
| IEEE | Institute of Electrical and Electronics Engineers |
| IGBT | Insulated-gate bipolar transistor |
| Imp | Peak Power Current |
| INR | Indian Rupees |
| IP | Ingress Protection |
| IS | Indian Standard |
| Isc | Short Circuit Current |
| ISI | Indian Standards Institute |
| ISO | International Standards Organization |
| ITB | Instructions to Bidders |
| JB | Junction Box |
| SERC | State Electricity Regulatory Commission |
| JSON | JavaScript Object Notation |
| Kg | Kilogram |
| km/hour | kilometres per hour |
| kVA | kilo-volt-ampere |
| kW | Kilowatt |
| LCD | Liquid Crystal Display |
| LED | Light Emitting Diode |

| | |
|--------|---|
| LoA | Letter of Authorization |
| LoI | Letter of Intent |
| LPSC | Lightning Protection System Components |
| LT | Low Tension |
| MCB | Miniature Circuit Breaker |
| MCCB | Moulded Case Circuit Breaker |
| Mm | Millimetre |
| MNRE | Ministry of New and Renewable Energy |
| MMS | Module Mounting Structure |
| MOSFET | Metal-Oxide Semiconductor Field-Effect Transistor |
| MOV | Metal Oxide Varistor |
| MPPT | Maximum Power Point Tracker |
| MSME | Micro, Small and Medium Enterprises |
| MW | Mega Watt |
| NIB | Notice Inviting Bid |
| NIT | Notice Inviting Tender |
| NOC | No Objection Certificate |
| O&M | Operations and Maintenance |
| PAN | Permanent Account Number |
| PBG | Performance Bank Guarantee |
| PCU | Power Conditioning Unit |
| PR | Performance Ratio |
| PGT | Performance Guarantee Test |
| PSU | Public Sector Undertaking |
| PV | Photovoltaic |
| PVC | Polyvinyl Chloride |
| PWM | Pulse width modulation |
| RFID | Radio Frequency Identification |
| RFP | Request for Proposal |
| RFS | Request for Selection |
| RTS | Rooftop Solar |

| | |
|------|----------------------------------|
| RWA | Residential Welfare Association |
| SBD | Standard Bid Document |
| SIM | Subscriber Identification Module |
| SNA | State Nodal Agency |
| SPD | Surge Protection Device |
| SPIN | Solar Photovoltaic Installation |
| SPV | Solar Photo Voltaic |
| sq.m | square meter |
| STC | Standard Testing Condition |
| TAC | Tariff Advisory Committee |
| THD | Total Harmonic Distortion |
| TIN | Taxpayer Identification Number |
| UV | Ultraviolet |
| V | Volt |
| VA | Volt Ampere |
| Vmp | Peak Power Voltage |
| Voc | Open Circuit Voltage |
| W | Watt |
| XLPE | Cross-linked polyethylene |
| XLPO | Cross-linked Polyolefin |
| XML | Extensible Mark-up Language |

SECTION-I

A: Introduction, Bid details and instructions to the Bidders

B: Conditions of Contract

A. INTRODUCTION, BID DETAILS AND INSTRUCTIONS TO THE BIDDERS**1. INTRODUCTION**

The Ministry of New and Renewable Energy, Government of India (MNRE) is implementing Phase-II of Grid Connected Rooftop Solar (GCRTS) Programme wherein central financial assistance (CFA) is being provided for installation of rooftop solar (RTS) projects in residential buildings. To implement the RTS activities in respect of the aforesaid programme, respective Power Distribution companies (DISCOMs) have been designated as the implementing agency. TPCODL is authorised to execute the tendering process for RTS Phase-II programme in all four Odisha Discoms on behalf of TPCODL, TPNODL, TPSODL and TPWODL. TPCODL shall be the common tendering agency for all the above DISCOMs and will identify L-1 rates and empanel vendors for implementation of the programme. The respective DISCOMs will execute RTS projects in their operational areas through the empanelled vendors, in accordance with the rates discovered in this tender.

- 1.1 This tender document is in accordance with MNRE Phase II guidelines vide notification 318/331/2017 dated 20.08.2019. The guidelines/scheme documents/amendments for Phase-II of GCRTS programme can be seen on SPIN portal (www.solarrooftop.gov.in).

Implementing Agency may register interested applicants for RTS installation under the scheme and the same may be shared with empanelled vendors for installation. For identification of applicants/consumers, DISCOMs may assist empanelled vendors. However, the entire responsibility of finding the applicants/consumers lies with the vendors. DISCOM/tendering authority/MNRE bears no responsibility in this regard.

- 1.2 This scheme with an aggregate capacity of 20,000 kW **as per clause No. 2.1** for state only envisages installation of grid-connected Rooftop solar projects on the roofs of consumers as specified by **MNRE vide Order No. 318/331/2017 – Grid Connected Rooftop Dated 20th August 2019** and their amendments issued from time to time:

| Sl. No. | Category | Coverage of Buildings |
|---------|-------------|---|
| (i) | Residential | All types of Residential buildings and Group Housing Societies/Residential Welfare Associations (GHS/RWA) |

The Ministry of New and Renewable Energy (MNRE), Government of India vide OM No. [32/24/2020 on 27th October 2021] has notified the Benchmark cost for Rooftop Solar Plants for FY 2021-22 are mentioned below. In order to address the recent changes in GST rates for identified renewable energy equipment's and also any further changes in GST rates in future, the MNRE has 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 for Grid-connected Rooftop Solar PV systems applicable for MNRE Scheme for the year 2021-22. The below benchmark costs are excluding of metering cost and battery back-up costs. Rooftop solar system capacity-wise benchmark costs mentioned below as under:

| S.No. | Capacity Range* | Benchmark Cost (INR/Wp) | |
|-------|-------------------|------------------------------|--|
| | | General Category States /UTs | Special Category States including North-Eastern States including Sikkim, Uttarakhand, Himanchal Pradesh, Jammu & Kashmir, Ladakh, Andaman & Nicobar and Lakshadweep island** |
| 1. | 1 kWp | 46,923 | 51,616 |
| 2. | 2 kWp | 43,140 | 47,447 |
| 3. | 3 kWp | 42,020 | 46,216 |
| 4. | Above 3-10 kWp | 40,991 | 45,087 |
| 5. | Above 10-100 kWp | 38,236 | 42,056 |
| 6. | Above 100-500 kWp | 35,886 | 39,467 |

*The project capacity shall be considered as Inverter capacity or the SPV module array capacity, whichever is lower, for the purpose of determining CFA. **The separate benchmark cost for Special Category States will be applicable for projects under phase II of the programme only.

Note:

- i. All the above benchmark costs are inclusive of total system cost including Photo-Voltaic solar modules, inverters, balance of systems including cables, Switches/Circuit Breakers /Connectors/ Junction Boxes, mounting structure, earthing, Lightning arrester, cost of meters (if any other than net meter), local connectivity cost, cost of civil works, foundations etc. and its installation, commissioning, transportation, insurance, capital cost of online monitoring, comprehensive maintenance charges for five years, applicable fees etc. and are exclusive GST.
- ii. The above-mentioned benchmark costs are excluding net metering cost and battery back-up costs.
- iii. The above-mentioned benchmark cost is indicative only. All participating DISCOMs under the phase II of the rooftop solar programme will ensure that the rate is discovered through transparent bidding process. **Prevailing MNRE benchmark cost should NOT be considered as the ceiling rate for any bidding agency.**
- iv. The benchmark cost for financial year 2021-22 will be applicable for all LoAs to be issued/ empanelment of developers/vendors to be done after date of issuance of the notification for the benchmark cost, by the implementing agencies in States/UTs. Moreover, if revised benchmark cost is issued by the Ministry before the final date of bid submission in any tender, the final date of bid submission shall be extended by minimum 15 days so that the bidders may submit revised bids in accordance with the revised benchmark cost. For such cases, bidders shall not be asked to re-submit any fees/bond, already submitted. The benchmark cost indicated in the LOA issued to an empanelled vendor will be applicable till the project completion timeline specified by MNRE in the sanction order or as specified in the LOA, whichever is earlier.

The CFA structure applicable is as Tabulated below (As per MNRE Guidelines or as applicable at the time of commissioning of the project):

| Type of Residential Sector | Central Financial Assistance (CFA) (as percentage of benchmark cost or cost discovered through competitive process, whichever is lower) |
|---|--|
| Residential sector (maximum up to 3 kW capacity) | 40 % of Benchmark Cost/discovered cost, whichever is lower |
| Residential sector (above 3 kW capacity and up to 10 kW capacity) | 40 % up to 3 kW Plus 20% for RTS system above 3 kW and up to 10 kW. (Percentage of benchmark cost/discovered cost, whichever is lower) |
| Group Housing Societies/Residential Welfare Associations (GHS/RWA) etc. for common facilities up to 500 kWp (@ 10 kWp per house), with the upper limit being inclusive of individual rooftop plants already installed by individual residents in that GHS/RWA at the time of installation of RTS for common activity. | 20% of Benchmark Cost/discovered cost, whichever is lower |

Note: Central Financial Assistance (CFA) disbursement will be governed as per MNRE Office Memorandum No.318/331/2017-GCRT Dated 3rd September 2019 on “Clarification on applicability of CFA individual residential households for installation of rooftop solar system under Phase-II of Grid-connected Rooftop Solar Programme”.

- 1.3 On behalf of TPCODL, which expression shall also include its successors and permitted assigns, hereby invites interested vendors to participate in the bidding process for the selection of Empanelment of vendors for implementation of Grid-connected Rooftop Solar Projects for 20,000 kWp aggregate capacity as per RFP.
- 1.4 The bidders who are techno-commercially qualified and wish to provide their services on the project cost discovered through transparent E-bidding process, shall be empanelled for implementation of the said project. The CFA shall be calculated as indicated in the above table on the basis of discovered price or MNRE benchmark cost, whichever is lower. The tenure of empanelment shall be 20 Months from the date of empanelment letter issued by Implementing Agency or upto the last date of the sanction period allocated by MNRE to Implementing Agencies i.e. 19th January 2022, whichever is earlier. Depending on requirement and with approval of MNRE, Implementing Agency may **extend the tenure of empanelled vendors for implementation of the project.**
- 1.5 The Bidders are advised to read carefully all instructions and conditions appearing in this document and understand them fully. All information and documents required as per the bid document must be furnished. Failure to provide the information and/ or documents as required may render the bid technically nonresponsive.

- 1.6 The bidder shall be deemed to have examined the bid document and MNRE scheme, to have obtained his own information in all matters whatsoever that might affect carrying out the works in line with the scope of work specified elsewhere in the document at the offered rates and to have satisfied himself to the level of sufficiency. The bidder shall be deemed to be in knowledge of 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, he has to complete in accordance with the bid documents irrespective of any defects, omissions or errors that may be found in the bid documents.

2.0 SIZE OF THE PROJECTS AND BID DETAILS:

- 2.1 The size of each project shall be in the range for each part as under:
- Part-A : 1 kWp
 - Part-B : 2 kWp.
 - Part-C : 3 kWp.
 - Part-D : Above 3 kWp to 10 kWp.
 - Part-E : Above 10 kWp to 100 kWp.
 - Part-F : Above 100 kWp to 500 kWp.

One part may however comprise of several rooftop units. Each Rooftop unit can separately connect with the grid and may have separate meters.

- 2.2 Entire allocated capacity is bifurcated into different parts; bidders may quote for one or more than one part.

**Aggregate Capacity 20,000 kW
(06 Different Parts)**

| S. No. | DISCOM | Allocated Capacity | Description | Proposed Capacity | | | | | |
|--------|--------|--------------------|-----------------------------------|-------------------|--------|--------|---------------------|-----------------------|------------------------|
| | | | | Part-A | Part-B | Part-C | Part-D | Part-E | Part-F |
| | | | | 1 kW | 2 kW | 3 kW | Above 3 kW to 10 kW | Above 10 kW to 100 kW | Above 100 kW to 500 kW |
| 1 | TPCODL | 5000 KW | Tentative Aggregate Capacity (kW) | 1000 | 700 | 800 | 750 | 750 | 1000 |
| 3 | TPSODL | 5000 KW | Tentative Aggregate Capacity (kW) | 1500 | 1250 | 1000 | 750 | 500 | 0 |
| 5 | TPNODL | 5000 KW | Tentative Aggregate Capacity (kW) | 1000 | 700 | 800 | 750 | 750 | 1000 |
| 7 | TPWODL | 5000 KW | Tentative Aggregate Capacity (kW) | 1000 | 750 | 1500 | 1250 | 500 | 0 |

Note:

1. The minimum bidding capacity in each Part is 100Kw
2. The final allocation of capacity in each part will be decided by each Implementing agency based upon the bid proposals received and to accommodate the full allocated capacity by MNRE.

The bids are invited from the prospective bidders for the tendered capacity based on the Project Cost. In this part, bidders are to be required to quote the Project Cost for the capacity proposed by the bidder (*in between the minimum and maximum range*). CFA shall be provided to the successful bidders as per the provisions laid down in the MNRE scheme.

However, MNRE vide Office Memorandum **No. 318/331/2017- Grid Connected Rooftop Dated 19th February 2021** has kept a provision of minimum **10% of the total allocated capacity under the tender to L1 bidder** and in the case L1 vendor does not execute the allocated capacity, as a penalty his/her bank guarantee will be encashed and he/she shall be blacklisted for 5 years.

- 2.3 Bids not in conformity with above provisions & sub-clauses of **Clause 2.2** will not be considered and shall be treated as nonresponsive/incomplete.
- 2.4 Further, Empanelled Vendors to whom letter of allocation have been issued will be allowed to submit

single proposal for approval and issue of consent letter by Implementing Agency for RTS installation, as under:

| S. No. | Category | Minimum Capacity for Project sanction |
|--------|----------|---------------------------------------|
| 1. | Part-A | 1 KW |
| 2. | Part-B | 2 KW |
| 3. | Part-C | 3 KW |
| 4. | Part-D | 4 KW |
| 5. | Part-E | 11 KW |
| 6. | Part-F | 101 KW |

Single consent letter will be issued for the minimum capacity submitted by the bidder for approval as per above.

- 2.5 Offer of the Vendors who will quote less than the minimum tendered capacity in respective category will be treated as non-responsive and shall be summarily rejected. However, Offer of the Vendors who have quoted more than the maximum tendered capacity in respective category will be limited to the maximum category wise tendered capacity.

3.0 Components/Package of Grid Connected Rooftop Solar PV System:

The bidders shall quote price of the complete package essentially covering - “design, supply, erection, testing and commissioning including warranty and 05 years of comprehensive operation & maintenance of grid-connected rooftop solar PV plant. 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, module mounting structures of minimum 300mm ground clearance at the lowest point from the roof surface, total Cable/wiring up to 30 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, drawling & manual and other miscellaneous works. The price shall also be inclusive of all duties and transit insurance of all components as mentioned in the benchmark cost of MNRE. However, the price quoted by the bidders should have the GST (Goods and Services Tax) mentioned separately.

The empanelled vendor shall not be allowed to charge any extra amount other than the L-1 price for the package of Grid Connected Rooftop Solar PV system as indicated above. However, in case of any customization desired by the beneficiary/consumer, the vendor is allowed to charge extra amount to the beneficiary/consumer, on actual basis, subject to signing of a declaration in this regard in the format attached at Annexure-Y.

4.0 INSTRUCTIONS TO THE BIDDERS

- 4.1 Bidders should not be blacklisted from any of the agency with direct or indirect control of Central Government Ministries/ Departments/ Public Sector Units (PSUs)/ Institutions, State Government Departments/ Organizations /Institutions etc.

- 4.1 Bidder should have valid PAN & GST Registration Numbers as per statutory requirement.
- 4.2 Bidder must meet the eligibility criteria independently as Bidding Company or as a Bidding Consortium with one of the members acting as the Lead Member of the Bidding Consortium. Bidder will be declared as a Qualified Bidder based on meeting the eligibility criteria (Technical and Financial) and as demonstrated based on documentary evidence submitted by the Bidder during the bidding process.
- 4.3 In case of a Bidding Consortium the Financial Eligibility criteria like Annual turnover or Net worth as indicated in **Clause 5.5.2**, shall be fulfilled by the Lead Member or Parent Company of the Lead Member while the Technical Eligibility Criteria shall be fulfilled by consortium members. In case bidder is a consortium, a Consortium Agreement along with Resolution shall be furnished as per the **Format-10**.
- 4.4 Financial Consortium is not allowed in this Bidding Process. Consortium is only permitted for Technical partnership as per **Format- 10**. Further in-case where the bidding company has used the financial eligibility criteria of its parent company then it needs to be ensured that no change in the controlling equity of the Bidding Company is done before 2 years from the date of commissioning of the sanctioned capacity, requires prior approval of Implementing Agency. All members of the consortium should be registered under the Company Act.
- 4.5 Bidder including its member of the consortium can submit only one bid against RFP.
- 4.6 Bidder can however use the technical and financial strength of its Parent Company to fulfil the Technical and/or Financial Eligibility criteria. In such case, Bidders shall submit an Undertaking from the Parent Company as per **Format - 9** and also furnish a certificate of relationship of Parent Company or Affiliate with the Bidding Company as per **Format-8**, Company Secretary certificate towards shareholding pattern of the Parent Company and the Bidding Company along with a Board resolution from the Parent Company.

5.0 PROCEDURE TO PARTICIPATE IN TENDER

| Tender Enquiry No. | Work Description | Tender Fee inclusive of GST (Rs.)** | Last Date for payment of Tender Fee |
|-------------------------------|--|-------------------------------------|-------------------------------------|
| TPCODL/P&S/1000000163/2021-22 | Design, supply, erection, testing and commissioning including warranty, Comprehensive operation & maintenance of Grid-Connected Rooftop Solar Plant of various capacities under the Phase-II of Grid Connected Rooftop Solar Scheme of MNRE in the State of Odisha | 5000 | 28-July-2021; 15:00 Hrs |

* EMD is exempted for MSMEs registered in the State of Odisha.

** MSMEs registered in the State of Odisha shall pay tender fee of Rs. 1,000/- including GST.

Following steps to be done before “Last date for Payment of Tender Fee” as mentioned above:

- I. Eligible and Interested Bidders to submit duly signed and stamped letter on Bidder's letter head indicating
 - a. Tender Enquiry number-
 - b. Name of authorized person-
 - c. Contact number-
 - d. E-mail id-
 - e. Details of submission of Tender Fee-
 - f. GST Registration No-

- II. Non-Refundable Tender Fee, as indicated in table above, to be submitted in the form of Direct Deposit in the following bank account and submit the receipt along with a covering letter clearly indicating the Tender Reference/ Enquiry Number –

Beneficiary Name – TP Central Odisha Distribution Ltd.

Bank Name – STATE BANK OF INDIA

Branch Name – IDCO Towers, Bhubaneswar

Address – PO- Sahidnagar, Janapath, Bhubaneswar.

Branch Code – 7891

Account No – 10835304915

IFSC Code – SBIN0007891

E-mail with necessary attachment of 1 and 2 above to be sent to arijeet.choudhury@tpcentralodisha.com with copy to imran.ahmad@tpcentralodisha.com before last date and time for payment of Tender Fee.

Interested bidders to submit Tender Fee and Authorization Letter before Last date and time as indicated above, after which link from TPCODL E-Tender system (Ariba) will be shared for further communication and bid submission.

Please note all future correspondence regarding the tender, bid submission, bid submission date extension, Pre-bid query etc will happen through TPCODL E-Tender system (Ariba). User manual to guide the bidders to submit the bid through E-Tender system (Ariba) is enclosed.

All communication will be done strictly with the bidders who have done the above step to participate in the Tender.

Also it may be strictly noted that once date of “Last date and time for Payment of Tender Participation Fee” is lapsed no Bidder will be sent link from TPCODL E-Tender System (Ariba). Without this link vendor will not be able to participate in the tender. Any last moment request to participate in tender will not be entertained.

Also all future corrigendum to the said tender will be informed on Tender section on website

<https://www.tpcentralodisha.com/>.

6.0 Mandatory documents required along with the Bid

- 6.1** EMD of requisite value and validity
- 6.2** Tender Fee of requisite amount
- 6.3** Requisite Documents for compliance to Qualification Criteria mentioned in Clause 1.7.
- 6.4** Drawing, Type Test details along with a sample of each item as specified at Annexure I (as applicable)
- 6.5** Duly signed and stamped ‘Schedule of Deviations’ as per Annexure III on bidder’s letter head.
- 6.6** Duly signed and stamped ‘Schedule of Commercial Specifications’ as per Annexure IV on bidder’s letter head.

6.7 Proper authorization letter/ Power of Attorney to sign the tender on the behalf of bidder.

6.8 Copy of PAN, GST, PF and ESI Registration (In case any of these documents is not available with the bidder, same to be explicitly mentioned in the 'Schedule of Deviations')

Please note that in absence of any of the above documents, the bid submitted by a bidder shall be liable for rejection.

7.0 ZERO DEVIATION

A substantially responsive "Financial Bid" is one as per ITB Clauses-9, which conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the bidding documents, the TPCODL rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

8.0 Right of Acceptance/Rejection

Bids are liable for rejection in absence of following documents: -

- i. EMD of requisite value and validity, if applicable
- ii. Tender fee of requisite value
- iii. Price Bid as per the Price Schedule mentioned in Annexure I (BOQ)
- iv. Necessary documents against compliance to Qualification Requirements mentioned at Clause 9 of this Tender Document
- v. Receipt of Bid within the due date and time

TPCODL reserves the right to accept/reject any or all the bids without assigning any reason thereof.

9.0 Qualification Requirement / Eligibility Criteria

The bidders are required to submit the following documents in 2nd Part through **Online Mode only** during Technical Bid Submission in State e-procurement Portal.

- i. Certificate of incorporation and updated Memorandum of Association (MoA).
- ii. Scanned copy of MSME/DIPP registration certificate under Renewable Energy sector.
- iii. Declaration on bidder's Letterhead for Non blacklisting from any Government Departments/ Public Sector Units (PSUs) / Distribution Companies etc.
- iv. PAN & GST Registration, however State GST Registration is mandatory for MSME Bidders.
- v. Technical Eligibility Criterion: scanned copy of the Commissioning certificate and Work order/ Contract/ Agreement/ from the Client/ Owner.
- vi. Financial Eligibility Criterion: scanned copy Balance showing Average Annual Turnover or Net worth.
- vii. Acceptance of RFP terms and conditions including amendments & clarification on letter head of the bidder.

General Condition:

To meet the General Conditions of Eligibility Criteria, Bidders must have one of the following credentials:

Bidder should have one of the following:

The Bidder should be either a body incorporated in India under the Companies Act, 1956 or 2013 including any amendment thereto.

Or

The Bidders should be a **Limited Liability Partnership firm.**

Or

The Bidders should be a **Proprietor firm.**

The Bidder should have valid PAN & GST registration certificate for General Bidder, however for MSMEs, State GST Registration is mandatory.

TECHNICAL ELIGIBILITY CRITERIA:

FOR GENERAL BIDDERS:

The Bidder should have designed, supplied, installed & commissioned Grid connected Solar PV Power Projects having aggregate capacity not less than 100KWp which should have been commissioned prior to submission of bids. The bids of only those bidders who qualify the minimum technical eligibility criterion shall be considered for determination of L-1 price.

Above-mentioned minimum aggregate capacity should have been commissioned prior to the Techno-Commercial Bid Opening date. Vendor must have to submit scanned copy of the Commissioning certificate and Work order/ Contract/ Agreement/ from the Client/ Owner.

Open Category: The bidders who do not have any prior experience or do not have minimum required prior experience in installation of grid connected solar PV power projects, shall not be allowed to quote L-1 price in bids. Such bidders will be allowed to implement rooftop solar projects subject to matching of L-1 price. The Implementing Agency reserves the right to allocate/sanction project capacities to such bidders in batches.

FINANCIAL ELIGIBILITY CRITERIA:

FOR GENERAL BIDDERS:

The Bidders should have minimum Average Annual Turn Over as indicated in the below mentioned table to qualify under Financial Eligibility Criteria:

| Description | Part-A | Part-B | Part-C | Part-D | Part-E | Part-F |
|--|--------|--------|--------|---------------------|-----------------------|------------------------|
| | 1 kW | 2 kW | 3 kW | Above 3 kW to 10 kW | Above 10 kW to 100 kW | Above 100 kW to 500 kW |
| Minimum Aggregate Capacity - Bidder should have designed, supplied, installed & commissioned, Grid connected Rooftop Solar Projects. | 100 | 100 | 100 | 100 | 100 | 100 |
| Average Annual Turnover in Cr. per MW of the capacity offered in its Bid in any one of the last 3 financial years ending 31.03.2021 subject to the condition that the Bidder should at least have completed one financial year. (Rs.) | 1Cr | 1Cr | 1Cr | 1Cr | 1Cr | 1Cr |

FOR STATE REGISTERED MSME:

The Bidders who are local MSME and registered under the MSME Development Act, 2006 in Odisha as per Section D, Division 35, Group 351 having NIC 5-digit code of 35105 (Electric power generation using solar energy) are exempted from the financial eligibility requirements. The Bidder being a local MSME must submit a valid copy of the certificate of registration issued by an appropriate authority. This is applicable only for the State registered MSMEs.

Or

Vendors registered with DIPP under Renewable Energy sector are eligible to participate in the Tender **Part A, B, C, D, E & F** only in line with Office Order of Department for Industrial Policy & Promotions issued vide no. 12 (11)/2017-SI dated 22.06.2017, which says that Central Ministries/ Departments may relax condition of prior turn over & prior experience in Public procurement subject to meeting of quality & technical specifications by Start-ups.

In case of more than one Price Bid submitted by the Bidder, the financial eligibility criteria must be fulfilled by such Bidder for the sum total of the capacities being offered by it in its Price Bid.

Open Category: The bidders willing/eligible to apply under open category, as indicated above, shall not be allowed to quote price in the bid and can only get empanelled at L-1 rate discovered in the tender.

Bidders shall furnish documentary evidence as per the **Format-7** (online), duly certified by Authorized Signatory and the Statutory Auditor / Practicing Chartered Accountant of the Bidding Company in support of their financial capability.

10.0 Marketing Integrity

We have a fair and competitive marketplace. The rules for bidders are outlined in the General Condition of Contracts. Bidders must agree to these rules prior to participating. In addition to other remedies available, TPCODL reserves the right to exclude a bidder from participating in future markets due to the bidder's violation of any of the rules or obligations contained in the General Condition of Contracts. A bidder who violates the market place rules or engages in behavior that disrupts the fair execution of the marketplace, may result in restriction of a bidder from further participation in the marketplace for a length of time, depending upon the seriousness of the violation. Examples of violations include, but are not limited to:

- Failure to honor prices submitted to the marketplace
- Breach of terms as published in TENDER/NIT

11.0 Supplier Confidentiality

All information contained in this tender is confidential and shall not be disclosed, published or advertised in any manner without written authorization from TPCODL. This includes all bidding information submitted to TPCODL. All tender documents remain the property of TPCODL and all suppliers are required to return these documents to TPCODL upon request. Suppliers who do not honor these confidentiality provisions will be excluded from participating in future bidding events.

12.0 Evaluation Criteria

- The bids will be evaluated technically on the compliance to tender terms and conditions
- The bids will be evaluated commercially on the overall all-inclusive lowest cost for the complete tender BOQ as calculated in Schedule of Items [Annexure I].

- TPCODL however, reserves right to split the order line item wise and/or quantity wise amongst more than one Bidder(s). Hence all bidders are advised to quote their most competitive rates against each line item.
- Bidder has to mandatorily quote against each item for each of the divisions of Schedule of Items [Annexure I]. Failing to do so, TPCODL may reject the bids.

NOTE: In case a new bidder is not registered with TPCODL, factory inspection and evaluation shall be carried out to ascertain bidder's manufacturing capability and quality procedures. However, TPCODL reserves the right to carry out factory inspection and evaluation for any bidder prior to technical qualification.

In case a bidder is found as Disqualified in the factory evaluation, their bid shall not be evaluated any further and shall be summarily rejected. The decision of TPCODL shall be final and binding on the bidder in this regard.

13.0 E-TENDER

SPECIAL INSTRUCTIONS TO BIDDERS FOR E- TENDERING GENERAL

E-Tendering is a new methodology for conducting Public Procurement in a transparent and secured manner. For conducting electronic tendering, TPCODL has decided to use ARIBA portal for all E-tendering processes.

SUBMISSION OF BID-PARTS

Bidders are requested to submit their offer in line with this Tender document. TPCODL shall respond to the clarification raised by various bidders and the replies will be sent to all participating bidders through TPCODL e-tender system (Ariba).

Bids shall be submitted in 3 (three) parts:

FIRST PART: "EMD" Bid security not applicable, however BA need to submit Bid Security Declaration as per the attached format.

SECOND PART: "TECHNICAL BID" shall contain the following documents:

- a) Documentary evidence in support of qualifying criteria
- b) Technical literature/GTP/Type test report etc. (if applicable)
- c) Qualified manpower (if available)
- d) Testing facilities (if applicable)
- e) No Deviation Certificate as per the Annexure III – Schedule of Deviations
- f) Acceptance to Commercial Terms and Conditions viz. Delivery schedule/period, payment terms etc. as per the Annexure IV – Schedule of Commercial Specifications.
- g) Quality Assurance Plan/Inspection Test Plan for supply items (if applicable)
- h) Project Implementation Plan including Level 2 Schedule for the project
- i) Unpriced mentioning "Quoted/Not Quoted" against all line items (Prices should not be mentioned)

The technical bid shall be properly indexed and is to be submitted through TPCODL E-tender platform (Ariba) only. Hard copy of Technical Bids need not be submitted.

The Bid prepared by the Bidder, and all correspondence and documents relating to the Bid exchanged by the Bidder and the TPCODL, shall be written in the English Language. Any printed literature furnished by the Bidder may be written in another Language, provided that this literature is accompanied by an English translation, in which case, for purposes of interpretation of the Bid, the English translation shall govern.

THIRD PART: "PRICE BID" shall contain only the price details and strictly in format as mentioned in Annexure I along with explicit break up of basic prices, Taxes & duties, Freight etc. In case any discrepancy is observed

between the item description stated in Schedule of Items mentioned in the tender and the price bid submitted by the bidder, the item description as mentioned in the tender document (to the extent modified through Corrigendum issued if any) shall prevail. Price Bid is to be submitted in soft copy through TPCODL E-Tendering system (Ariba) only. Hard copy of Price Bid not be submitted.

SIGNING OF BID DOCUMENTS:

The bid must contain the name, residence and place of business of the person or persons making the bid and must be signed and sealed by the Bidder with his usual signature. The names of all persons signing should also be typed or printed below the signature.

The Bid being submitted must be signed by a person holding a Power of Attorney authorizing him to do so, certified copies of which shall be enclosed.

The Bid submitted on behalf of companies registered with the Indian Companies Act, for the time being in force, shall be signed by persons duly authorized to submit the Bid on behalf of the Company and shall be accompanied by certified true copies of the resolutions, extracts of Articles of Association, special or general Power of Attorney etc. to show clearly the title, authority and designation of persons signing the Bid on behalf of the Company. Satisfactory evidence of authority of the person signing on behalf of the Bidder shall be furnished with bid.

A bid by a person who affixes to his signature the word ‘President’, ‘Managing Director’, ‘Secretary’, ‘Agent’ or other designation without disclosing his principal will be rejected.

The Bidder’s name stated on the Proposal shall be the exact legal name of the firm.

14.0 Contact Information

Please note all correspondence regarding the tender, bid submission, bid submission date extension, Pre-bid query etc will happen through TPCODL E-Tender system (Ariba).

All communication will be done strictly with the bidder who have done the above step to participate in the Tender.

Communication Details:

Package Owner

Name: Arijeet Choudhury
Designation: Procurement (Commercial Services)
Contact No.: 9871432126
E-Mail ID: arijeet.choudhury@tpcentralodisha.com

Escalation Matrix

Name: Imran Ahmad
Designation: HoG-Procurement (Commercial Services)
Contact No.: 9958294855
E-Mail ID: imran.ahmad@tpcentralodisha.com

Name: Mr. Sudhakar Behera
Designation: Sr. General Manager - Procurement
Contact No.: 9437282663
E-Mail ID: sudhakar.behera@tpcentralodisha.com

Bidders are strictly advised to communicate with Package Owner through TPCODL E-tender System (Ariba) only. **They need to pay Tender Participation Fee to receive the Ariba log-in.**

15.0 Bid Prices

Bidders shall quote for the entire Scope of Supply/ work with a break up of prices for individual items and Taxes & duties. The bidder shall complete the appropriate Price Schedules included herein, stating the Unit Price for each item & total price with taxes, duties & freight up to destination at various sites of TPCODL. The all-inclusive prices offered shall be inclusive of all costs as well as Duties, Taxes and Levies paid or payable during the execution of the supply work, breakup of price constituents.

Applicable GST to be specified clearly.

The quantity break-up shown elsewhere other than Price Schedule is tentative. The bidder shall ascertain himself regarding material required for completeness of the entire work. Any items not indicated in the price schedule but which are required to complete the job as per the Technical Specifications/ Scope of Work/ SLA mentioned in the tender, shall be deemed to be included in prices quoted.

15.1 Bid Currencies

Prices shall be quoted in Indian Rupees Only.

15.2 Period of Validity of Bids

Bids shall remain valid for 180 days from the due date of submission of the bid.

Notwithstanding clause above, the TPCODL may solicit the Bidder's consent to an extension of the Period of Bid Validity. The request and responses thereto shall be made in writing.

15.3 Alternative Bids

Bidders shall submit Bids, which comply with the Bidding documents. Alternative bids will not be considered. The attention of Bidders is drawn to the provisions regarding the rejection of Bids in the terms and conditions, which are not substantially responsive to the requirements of the bidding documents.

15.4 Modifications and Withdrawal of Bids

The bidder is not allowed to modify or withdraw its bid after the Bid's submission. The EMD as submitted along with the bid shall be liable for forfeiture in such event.

15.5 Earnest Money Deposit (EMD)

The bidder shall furnish, as part of its bid, an EMD amounting as specified in the tender. The EMD is required to protect TPCODL against the risk of bidder's conduct which would warrant forfeiture.

The EMD shall be denominated in any of the following form:

- Banker's Cheque/ Demand Draft/ Pay order drawn in favor of TP Central Odisha Distribution Limited payable at Bhubaneswar.
- Online transfer of requisite amount through NEFT/ RTGS.
- Bank Guarantee valid for 210 days after due date of submission.

The EMD shall be forfeited in case:

- a) The bidder withdraws its bid during the period of specified bid validity.

Or

- b) The successful Bidder does not
 - a) accept the Purchase Order, or
 - b) furnish the required Performance Security Bank Guarantee

16 Bid Opening & Evaluation process

16.1 Process to be confidential

Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process. Any effort by a Bidder to influence the TPCODL's processing of Bids or award decisions may result in rejection of the Bidder's Bid.

16.2 Technical Bid Opening

Bids will be opened at TPCODL Office, Bhubaneswar. All tender bids shall be opened internally by TPCODL. Presence of any bidder will not be allowed during bid opening process. Technical bid must not contain any cost information whatsoever.

First the envelope marked "EMD" will be opened. Bids without EMD/cost of tender (if applicable) of required amount/ validity in prescribed format, shall be rejected.

Next, the technical bid of the bidders who have furnished the requisite EMD will be opened, one by one.

16.3 Preliminary Examination of Bids/Responsiveness

TPCODL will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bids are generally in order. TPCODL may ask for submission of original documents in order to verify the documents submitted in support of qualification criteria.

Arithmetical errors will be rectified on the following basis: If there is a discrepancy between the unit price and the total price per item that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price per item will be corrected. If there is a discrepancy between the Total Amount and the sum of the total price per item, the sum of the total price per item shall prevail and the Total Amount will be corrected.

Prior to the detailed evaluation, TPCODL will determine the substantial responsiveness of each Bid to the Bidding Documents including production capability and acceptable quality of the Goods offered. A substantially responsive Bid is one, which conforms to all the terms and conditions of the Bidding Documents without material deviation.

Bid determined as not substantially responsive will be rejected by the TPCODL and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

16.4 Techno Commercial Clarifications

Bidders need to ensure that the bids submitted by them are complete in all respects. To assist in the examination, evaluation and comparison of Bids, TPCODL may, at its discretion, ask the Bidder for a clarification on its Bid with respect to the TPCODL specifications and attempt will be made to bring all bids on a common footing. All responses to requests for clarification shall be in writing and no change in the price or substance of the Bid shall be sought, offered or permitted owing to any clarifications sought by TPCODL.

16.5 Price Bid Opening

Price bids will be opened internally without the presence of any bidder representative. The EMD of the bidder withdrawing or substantially altering his offer at any stage after the technical bid opening will be forfeited at the sole discretion of TPCODL without any further correspondence in this regard.

16.6 Reverse Auctions

TPCODL reserves the right to conduct the reverse auction (instead of public opening of price bids) for the products/ services being asked for in the tender. The terms and conditions for such reverse auction events shall be as per the Acceptance Form attached as Annexure VI of this document. The bidders along with the tender document shall mandatorily submit a duly signed copy of the Acceptance Form attached as Annexure VI as a token of acceptance for the same.

17 Award Decision

TPCODL will award the contract to the successful bidder whose bid has been determined to be the lowest-evaluated responsive bid as per the Evaluation Criterion mentioned at Clause 2.0. The Cost for the said

calculation shall be taken as the all-inclusive cost quoted by bidder in Annexure I (Schedule of Items) subject to any corrections required in line with Clause 4.3 above. The decision to place purchase order/LOI solely depends on TPCODL on the cost competitiveness across multiple lots, quality, delivery and bidder's capacity, in addition to other factors that TPCODL may deem relevant.

TPCODL reserves the rights to award contract to one or more bidders so as to meet the delivery requirement or nullify award decision without assigning any reason thereof.

In case any supplier is found unsatisfactory during delivery process, the award will be cancelled and TPCODL reserves right to award contract to other suppliers who are found fit.

18 Order of Preference/Contradiction

In case of contradiction in any part of various documents in tender, following shall prevail in order of preference:

1. Schedule of Items (Annexure I)
2. Post Award Contract Administration (Clause 7.0)
3. Submission of Bid Documents (Clause 3.0)
4. Scope of Work and SLA (Annexure VII)
5. Technical Specifications (Annexure II)
6. Acceptance Form for Participation in Reverse Auction (Annexure VI)
7. General Conditions of Contract (Annexure VIII)

19 Post Award Contract Administration

19.1 Climate Change

Significant quantities of waste are generated during the execution of project and an integrated approach for effective handling, storage, transportation and disposal of the same shall be adopted. This would ensure the minimization of environmental and social impact in order to combat the climate change. Please refer attached Environment Policy and Sustainability Policy, Annexure-XI for more details.

19.2 Ethics

TPCODL is an ethical organization and as a policy TPCODL lays emphasis on ethical practices across its entire domain. Bidder should ensure that they should abide by all the ethical norms and in no form either directly or indirectly be involved in unethical practice.

TPCODL work practices are governed by the Tata Code of Conduct which emphasizes on the following:

- We shall select our suppliers and service providers fairly and transparently.
- We seek to work with suppliers and service providers who can demonstrate that they share similar values. We expect them to adopt ethical standards comparable to our own.
- Our suppliers and service providers shall represent our company only with duly authorized written permission from our company. They are expected to abide by the Code in their interactions with, and on behalf of us, including respecting the confidentiality of information shared with them.
- We shall ensure that any gifts or hospitality received from, or given to, our suppliers or service providers comply with our company's gifts and hospitality policy.
- We respect our obligations on the use of third party intellectual property and data.

Bidder is advised to refer Tata Code of Conduct (TCOC) attached at Annexure X for more information.

Any ethical concerns with respect to this tender can be reported to the following e-mail IDs:

- 1) Chief Ethics Counselor – Ravindra.singh@tpcentralodisha.com

20 Specification and standards

As per Annexure.

21 General Condition of Contract

Any condition not mentioned above shall be applicable as per GCC attached along with this tender.

22 Safety

All jobs are this tender have to be executed strictly in compliance to the Safety terms and Conditions of TP Central Odisha Distribution Limited. Please refer attached Safety terms and conditions, Annexure-IX, for details. Violation of Safety norms will result in Penalty as mentioned in the above document.

23 Special Note on Security and Transparency of Bids

Security related functionality has been rigorously implemented in e-procurement portal in a multidimensional manner. Starting with 'Acceptance of Registration by the Service Provider', provision for security has been made at various stages in Electronic Tender's software.

If variation is noted between the information contained in the Electronic Form and the 'Hard Copy', the contents of the Electronic Forms and details shall prevail. In such cases, if the information/declaration/details contained in the electronic forms is found to be false, forged, incomplete or in-eligible, the bid shall be summarily rejected and the tendering authority may initiate blacklisting/criminal/legal proceedings depending on the severity of the case.

In case of any discrepancy between the values mentioned in figures and in words, the value mentioned in words shall prevail.

Other Instructions

It shall be the sole responsibility of the bidders to regularly visit the website/tender portal/state portal/SPIN portal for any amendment or update on the tender process of project.

24 BIDDING PROCESS

24.1 BID FORMATS – For each part

The Bidders are advised to submit bids against each Six Parts i.e. for Part A, Part B, Part C, Part D, Part E and Part F as in the manner provided in **Clause 6 of Section-I** and submit requisite document as per **Clause 5.3**.

PRICE BID(S): The Bidder shall submit online Price Bid Part A, Part B, Part C, Part D, Part E and Part F separately as per **SECTION-IV** against each part. **Only online price bids shall be considered for evaluation, any offline submission shall be treated as non-responsive and shall be summarily rejected.**

. The implementing agencies shall also identify the quantum of capacity for Part-A, Part-B, Part-C, Part-D, Part-E and Part-F and also for districts/regions depending upon the mode of implementation, considering 10% of the capacity to be implemented by the L-1 bidder. In case bids are not received for a particular districts/locality/area/region, depending on the mode of implementation, re-tendering would be done to

identify L-1 price for such cases. In the re-tendering, the bidders who have already participated in the tender will not be allowed to participate. In case L-1 price is not discovered for such areas through re-tendering, L-1 price for such areas would be identified by MNRE & implementing agencies from among the prices already discovered through first tender. All firms willing to match the L-1 price thus identified would be allowed to implement projects in such areas and for such cases the condition for 10% capacity implementation by L-1 would not be applicable.

24.2 VALIDITY OF BID

- 24.2.1 The bid and the Price Schedule included shall remain valid for the validity of MNRE sanction i.e. 24 months from the date of sanction i.e 19/01/2022 or timeline specified in the work order, whichever is earlier. The bidder shall have no right to withdraw, revoke or cancel his offer or unilaterally vary the offer submitted or any terms thereof during the entire process. In case of the bidder revoking or cancelling his offer or varying any term & conditions in regard thereof or not accepting letter of allocation, TPCODL shall forfeit the furnished Bid Bond/ EMD. Confirmation regarding the Bid offer validity shall be clearly mentioned in the covering letter.
- 24.2.2 In exceptional circumstances when letter of allocation is not issued TPCODL may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The validity of submitted Bid Bond/EMD as per **Clause 10.9** shall also be suitably extended. A Bidder may refuse the request without forfeiting its Bid Bond / EMD. A Bidder granting the request will neither be required nor permitted to modify the articulated terms and conditions in any manner.

24.3 COST OF BIDDING

The bidder shall bear all the costs associated with the preparation and submission of their offer, and the implementing agency will not be responsible or liable for those 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 TPCODL may elect to modify/withdraw the invitation of Bid.

24.4 BID BOND/EMD (To be submitted in both form original (offline) and Scan Copy Online only)

Bid security not applicable, however BA need to submit Bid Security Declaration as per the attached format.

24.5 PERFORMANCE BANK GUARANTEE (PBG)

Performance Bank Guarantee:

The bidder has to submit the PBG in the following manner:

Performance Bank Guarantee for Installation and Commissioning (I&C): The bidder shall furnish the performance bank guarantee for installation and commissioning based on the allocated capacity.

PBG amount = INR [*Insert the Amount (cost discovered)*] Lakhs X 5% X Allocated Capacity in KWp.**

** Performance Bank Guarantee for MSME registered in the State of Odisha shall be 25% of the value normally prescribed.

The PBG shall be submitted within 30 days from the date of issue of LOI/LOA/Work Order, whichever is issued first, and be valid for 15 months. Bidders should submit Single PBG based on the allocated capacity in each category. The Performance Bank Guarantee shall be released after completion of the empanelment period with the compliance of entire obligations in the contract.

Further, any delay in submission of PBG for I & C period beyond 60 days, [Insert the name of State Implementing Agency] at its sole discretion may cancel the allocated capacity and forfeit 100% of Bid bond. Such Vendors (who have not submitted PBG) shall be debarred from participating in [Insert the name of State Implementing Agency] is future tenders for a period as decided by Competent Authority. Part PBG shall not be accepted.

Performance Bank Guarantee for Operation and Maintenance: The bidder shall furnish the performance bank guarantee for O&M based on the installed capacity.

PBG amount = INR [Insert the Amount (cost discovered)] Lakhs X 5% X Installed **Capacity in kWp.****

** Performance Bank Guarantee for MSME registered in the State of Odisha shall be 25% of the value normally prescribed.

The PBG shall be submitted within 30 days from the end of the empanelment period and be valid for 05 year + 3 months. Bidders should submit Single PBG based on the installed capacity in each category. The Performance Bank Guarantee shall be released after completion of the O&M period with the compliance of entire obligations in the contract.

Further, any delay in submission of PBG for O&M period beyond 60 days, implementing Agency at its sole discretion may forfeit 100% of PBG for the I&C period. Such Vendors (who have not submitted PBG) shall be debarred from participating in implementing Agency is future tenders for a period as decided by Competent Authority. Part PBG shall not be accepted.

Performance Bank Guarantee for MSME registered in the State of Odisha shall be 25% of the value normally prescribed. The Performance Bank Guarantee shall be denominated in Indian Rupees and shall be in the following forms: Bank guarantee from the List of banks as given in **Annexure-B**.

The PBG shall be forfeited as follows without prejudice to the Bidder being liable for any further consequential loss or damage incurred to the Plant.

- 24.5.1 If the Empanelled Vendor is not able to commission the projects to the satisfaction of implementing Agency, PBG (for I&C period) amount on pro-rata basis by the empanelled vendor shall be 100% encashed.
- 24.5.2 In all the above cases corresponding unidentified/non-commissioned capacity shall stand cancelled.
- 24.5.3 If the empanelled vendor is unable to submit the PBG (for O&M period), the PBG (for I&C period) shall be encashed.

24.6 RIGHT TO WITHDRAW THE RFP AND TO REJECT ANY BID

- 24.6.1 This RFP may be withdrawn or cancelled by TPCODL at any time without assigning any reasons thereof. TPCODL 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.
- 24.6.2 The TPCODL reserve 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 TPCODL shall have no liability towards any Bidder and no Bidder shall have any recourse to TPCODL with respect to the selection process. TPCODL shall evaluate the Bids using the evaluation process specified in Section -I, at its sole discretion. TPCODL decision in this regard shall be final and binding on the Bidders.
- 24.6.3 TPCODL reserves its right to vary, modify, revise, amend or change any of the terms and conditions of the Bid before submission. The decision regarding acceptance of bid by TPCODL will be full and final.

24.7 EXAMINATION OF BID DOCUMENT

- 24.7.1 The Bidder is required to carefully examine the Technical Specification, Terms and Conditions of Contract, and other details relating to supplies as given in the Bid Document.
- 24.7.2 The Bidder shall be deemed to have examined the bid document including the agreement/ contract, to have obtained information on all matters whatsoever that might affect to execute the project activity and to have satisfied himself as to the adequacy of their bids. The bidder shall be deemed to have known the scope, nature and magnitude of the supplies and the requirements of material and labour involved etc. and as to all supplies, he has to complete in accordance with the Bid document.
- 24.7.3 Bidder is advised to submit the bid on the basis of conditions stipulated in the Bid Document. Bidder's standard terms and conditions if any will not be considered. The cancellation / alteration / amendment / modification in Bid documents shall not be accepted by TPCODL.
- 24.7.4 Bid not submitted as per the instructions to bidders is liable to be rejected. Bid shall confirm in all respects with requirements and conditions referred in this bid document.

B: CONDITIONS OF CONTRACT

1. SCOPE OF WORK

- 1.1** The Bidders shall be obliged to complete the Work as per the articulated detailed Scope of work under **Clause No. 1 and in accordance with the package of Grid Connected Rooftop Solar PV project defined above.**

2. PROJECT COST

- 2.1** The Project cost shall include all the costs related to above Scope of Work. Bidder shall quote for the entire facilities on a “single responsibility” basis such that the total Bid Price covers all the obligations mentioned in the Bidding Documents in respect of Design, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance (for a period of 5 years), goods and services including spares required if any during O&M period. The Bidder has to take all permits, approvals and licenses, insurance etc., provide training and such other items and services required to complete the scope of work as mentioned above.
- 2.2** The Project cost is on lump sum turnkey basis and the bidder is responsible for the entire Scope of work as per RFP.
- 2.3** The Project cost shall remain firm and fixed and shall be binding on the Successful Bidder till completion of work for payment of CFA amount irrespective of his actual cost of execution of the project. No escalation will be granted on any reason whatsoever. The bidder shall not be entitled to claim any additional charges, even though it may be necessary to extend the completion period for any reasons whatsoever.
- 2.4** The Project cost shall be **inclusive of all duties and transit insurance** etc while the GST should be mentioned separately. The prices quoted by the firm shall be complete in all respect and no price variation /adjustment shall be payable by Implementing Agency. However, statutory variation of taxes and duties may be paid by the roof top owner.
- 2.5** Operation & Maintenance of Solar PV Power Plant would include wear, tear, overhauling, machine breakdown, insurance, and replacement of defective modules, invertors / Power Conditioning Unit (PCU) spares, consumables & other parts for a period of 05 years projects.
- 2.6** The Project cost shall be specified in consent letter based on Empanelled Vendor’s quote for each project. The project cost shall be in accordance with all terms, conditions, specifications and other conditions of the Contract as accepted by the Implementing Agency and incorporated into the consent letter.
- 2.7** The Bidder shall complete the Price Bid as per applicable **Formats** online only (Section-IV) furnished in the RFP Documents.

2.8 INSURANCE

- 2.8.1 The Empanelled Vendor shall be responsible and take an Insurance Policy for all the materials to cover all risks and liabilities for supply and storage of materials at site, installation, testing and commissioning. However, this shall not include insurance of commissioned plant after handing over to the beneficiary.
- 2.8.2 Before commencement of work, the Empanelled Vendor shall also take insurance for Third Party Liability covering loss of human life, engineers and workmen and also covering the risks of damage to the third party/material/equipment/properties during execution of the Contract. The Empanelled Vendor will ensure that all its employees and representatives are covered by suitable insurance against any damage, loss, injury or death arising out of the execution of the work or in carrying out the Contract. Liquidation, Death, Bankruptcy etc., shall be the responsibility of bidder.
- 2.8.3 The bidder shall also take appropriate insurance during O&M period.
- 2.8.4 The Insurance covers as mentioned in **clause No. 2.8** is mandatory and in case of any violation of not taking Insurance Cover may result in imposition of Penalty. Penalty shall be deducted from the Vendors claim for CFA as under and the CFA, in such cases shall be released only on submission of Indemnity Bond as per the format attached as per **Annexure N**. The provision of penalty for not taking insurance is one time only, on repetition of the same, the sanctioned of the particular site will be waived-Off.

2.9 WARRANTEES AND GUARANTEES

The Empanelled Vendor shall provide warrantee covering the rectification of any and all defects in the design of equipment, materials and workmanship including spare parts for a period of 5 years from the date of commissioning for projects.

2.10 Penalty Provisions

- 2.10.1 Penalty will be imposed on bidder by implementing agency if following conditions are encountered:
- i. If L1 bidder fails to execute 10% of the total allocated capacity under this tender, as a penalty his/her bank guarantee will be encashed, and he/she shall be blacklisted for 5 years from all tenders of Implementing Agency.
 - ii. If bidders demand for additional amount/remuneration against the installation of work on and above the discovered L1 rate for the identified package.
 - iii. If bidders are defaulting in submission of Bank Guarantee/Required Relevant Documents during the bidding/empanelment process.
 - iv. If bidders denied implementing projects in allocated districts/regions/clusters etc.
 - v. Non- performance of the RTS plant based on PR as mentioned in the **clause No. 2.14**.
 - vi. If bidders are failed to comply with DCR, ALMM and other mandatory requirements of Phase-II Guidelines and issued Amendments.

Penalties may lead to the encashment of Partial/full Performance Bank Guarantee and subsequently debarring or blacklisting from the future Tenders by the Implementing Agency.

To ensure the performance of the empanelled vendors, and declaration to take the liabilities of paying /submitting 10% CPG apart from other penal provisions of the tender in the event of non-performance of failure to fulfilment of contract obligations or terms and conditions of RFP required to be submitted on appropriate value of non-judicial stamp paper.

2.11 TYPE AND QUALITY OF MATERIALS AND WORKMANSHIP

- 2.11.1 The design, engineering, manufacture, supply, installation, testing and performance of the equipment shall be in accordance with latest appropriate IEC/ Indian Standards as detailed in the **Section- III (Technical specifications)** of the bid document.
- 2.11.2 The specifications of the components should meet the technical specifications mentioned in **Section III**.
- 2.11.3 Any supplies which have not been specifically mentioned in this Contract but which are necessary for the design, engineering, manufacture, supply & performance or completeness of the project shall be provided by the Bidder without any extra cost and within the time schedule for efficient and smooth operation and maintenance of the SPV plant.

2.12 OPERATION & MAINTENANCE (O&M) GUIDELINES TO BE MANDATORILY FOLLOWED BY BIDDERS.

- 2.12.1 The bidder shall be responsible for all the required activities for successful operation and maintenance of the Rooftop Solar PV system for a period of 5 years from the date of commissioning of the plant.
- 2.12.2 Below mentioned guidelines, shall be followed for O&M practices, which is not limited to **Annexure-D**.
- i. O&M of Solar Power Plant shall be compliant with grid requirements to achieve committed energy generation.
 - ii. Deputation of qualified and experienced engineer/ technicians till the O&M period at project site as & when required.
 - iii. Quarterly checks of the Modules, PCUs and BoS shall be carried out as a part of routine preventive and breakdown maintenance.
 - iv. Immediate replacement of defective Modules, Invertors/PCUs and other equipment as and when required.
 - v. Supply of all spares, consumables and fixtures as required. Such stock shall be maintained for all associated equipment and materials as per manufacturer/ supplier's recommendations.
 - vi. All the equipment testing instrument required for Testing, Commissioning and O&M for the healthy operation of the Plant shall be maintained by the Bidder. The testing equipment must be calibrated once every 2 years from NABL accredited labs and the certificate of calibration must be kept for reference as required.
 - vii. If negligence/ mal-operation on part of the Bidder's operator results in failure of equipment, such equipment should be repaired/ replaced by the Bidder free of cost.
 - viii. Co-ordination with Owner / DISCOM / CEIG as per the requirement for Joint Metering Report (JMR). The person in charge present at site from bidder's side shall take a joint meter reading in the presence of rooftop owner as per billing cycle. Furnishing generation data each month to Implementing Agency positively by 1st week of every month for the previous month. **Failure to adhere may result in non-disbursal of CFA.**

- 2.12.3 A maintenance record register is to be maintained by the operator/technician/bidder with effect from

Commissioning to record the generation, regular maintenance work carried out as well as any preventive and breakdown maintenance along with the date of maintenance, reasons for the breakdown, duration of the breakdown, steps taken to attend the breakdown, etc. **Failure to adhere to above shall result in non-disbursal of CFA/ Encashment (Partial/Complete) of Performance Bank Guarantee/ any other penal action subject to the decision of Implementing Agency.**

- 2.12.4 If any jobs covered in O&M Scope as per RFP are not carried out by the contractor/ Bidders during the O&M period, the designated Official shall take appropriate action as deemed fit. Implementing Agency reserves the right to make surprise checks/ inspection visits at its own or through authorized representative to verify the O&M activities being carried out by the Bidder. **Failure to adhere to above guidelines will result in penal action including debarring from participation in next tender.**
- 2.12.5 The Bidders should have their service network in or Implementing Agency, within a radius of 50 Kms and shall provide address of service centre in O&M manual. A copy of the same shall also be provided to the Implementing Agency.
- 2.12.6 The bidder shall use the original parts in case of any fault in the PCU/Inverter during the AMC period of 5 years. In case the original part/parts are not available with the manufacturer of the PCU/Inverter (Based on certificate from the manufacturer), the bidder shall use the new parts of other standard brands available in the market or will use the repaired parts.
- 2.12.7 **If Bidders are fail to comply with the O&M guidelines, it may lead to the encashment of Performance Bank Guarantee and subsequently debarring or blacklisting from the future State/Central Government Tender.**

2.13 METERING AND GRID CONNECTIVITY

Metering and grid connectivity of the Solar Rooftop Plants under this scheme would be the responsibility of the Empanelled Vendor in accordance with the terms and conditions laid down in bid document and prevailing guidelines/regulation of State Electricity Regulatory Commission (SERC)/ Central Electricity Authority (CEA) and issued amendments.

2.14 PLANT PERFORMANCE EVALUATION

The Empanelled Vendor shall be required to meet minimum guaranteed generation with Performance Ratio (PR) at the time of commissioning as per the radiation levels of the location during the O&M period. PR should be shown minimum of 75% at the time of inspection for initial commissioning acceptance to qualify for release of CFA. The PR will be measured at Inverter output level during peak radiation conditions.

2.15 PROGRESS REPORT

The bidder shall submit the monthly progress report Implementing Agency in Prescribed Performa during the period of installation. Implementing Agency will have the right to depute its representatives to ascertain the progress of contract at the premises of works of the empanelled vendors.

2.15.1 Submission of Project Completion Report (PCR)

The Empanelled Vendor shall submit the Project Completion Report in (soft copy and signed copy) after commissioning of the project as per the Scope of RFP Implementing Agency as per the Format given in Annexure J. Non submission of the report shall be considered as “Breach of Contract” and shall attract punitive actions as per the relevant provisions of the Contract including non-release of CFA. However, the decision

of Engineer-in -charge shall be final in this regard.

2.15.2 Submission of O&M Report (OMR)

The bidder shall submit the quarterly O&M Report mandatorily to Implementing Agency as per the Format enclosed at **Annexure H**. Non submission of the report shall be considered as “Breach of Contract” and shall attract punitive actions as per the relevant provisions of the Contract including non-release of CFA. However, the decision of Engineer-in -charge shall be final in this regard.

2.16 INVOICE TO CONSUMER

The selected bidders shall raise the Tax invoice to the consumers after completion of the project as per the **Annexure I**. The tax invoice should contain all invocable items with the applicable tax as per Gol GST slabs. The net invoice amount considered for CFA shall not exceed per kW discovered rate and the additional cost if any, agreed by consumer should be stated separately.

2.17 CHANGE IN LAW

In the event a Change in Law results in any adverse financial loss/ gain to the Empanelled Vendor then, in order to ensure that the Empanelled Vendor is placed in the same financial position as it would have been had it not been for the occurrence of the Change in Law, the Empanelled Vendor/ DISCOMs on behalf of residential consumer shall be entitled to compensation by the other party, as the case may be, subject to the condition that the quantum and mechanism of compensation payment shall be determined and shall be effective from such date as decided by Implementing Agency .

In these Guidelines, the term Change in Law shall refer to the occurrence of any of the following events after the last date of the bid submission, including (i) ***the enactment of any new law; or (ii) an amendment, modification or repeal of an existing law; or (iii) the requirement to obtain a new consent, permit or license; or (iv) any modification to the prevailing conditions prescribed for obtaining an consent, permit or license, not owing to any default of the empanelled vendor; or (v) any change in the rates of any Taxes which have a direct effect on the Project.*** However, Change in Law shall not include any change in taxes on corporate income or any change in any withholding tax on income or dividends.

The bidders are required to study carefully the conditions of the tender document, the enclosed specifications and the relevant provision of the relevant BIS/IS/MNRE specifications wherever necessary before submitting the proposal. Technical particulars of the material offered must comply with the enclosed specifications and the relevant provisions of the BIS/IS/MNRE as far as possible.

Any changes in the constitution of the firm/company shall be notified forth with by the Empanelled Vendor in writing to the Company and such change shall not relieve the tenderer from any liability under the contract.

Bidder will have to submit GST registration certificate number and GST clearance certificate from the competent authority concerned along with the proposal without which proposals may not be considered provided that the purchasing authority has reason to believe (to be recorded in writing) that the bidder has not been able to submit clearance certificate of GST on bona-fide grounds, the authority may consider the tender asking the bidder to furnish the certificate later on but in any case before the execution of the agreement by the successful bidder.

The bidder shall sign on each page at the end in token of acceptance of all the terms and it would be attached /uploaded with the proposal along with the declaration. He should also sign at the bottom of each of the pages of his tender.

The authorisation for installing SPV system can be repudiated at any time by the respective DISCOM if the systems are not supplied and installed to its satisfaction. The reasons for repudiation shall be recorded by the respective DISCOM. In case of non-performance in any form and shape of the terms & conditions of the agreement Appropriate Authority, of the respective DISCOM has power to cancel the authorisation pertaining to the supply and installation of systems.

If a bidder imposes conditions, which are in addition to/or in contravention with the conditions mentioned herein, his tender is liable to be summarily rejected. In any case none of such conditions will be deemed to have been accepted unless specifically mentioned in the letter of authorisation issued by DISCOM.

If any question is raised or issue arises between the consumer and Empanelled Vendor and matter is taken to a consumer court, the DISCOMs and the holding company shall not be responsible in any manner and shall not be made a party in it.

2.18 PROJECT INSPECTION

All project progress will be monitored by Implementing Agency and the projects can be inspected for quality at any time during commissioning or after the completion of the project by officer(s) from MNRE and/or Implementing Agency and/or any agency/ experts designated / authorized by MNRE and/ Implementing Agency from time to time. Implementing Agency shall depute a technical person from its office or from list of empanelled experts/ agencies updated from time to time for inspection, third party verification, monitoring of system installed to oversee the implementation as per required standards. The cost of inspection at the time of commissioning shall be borne by the implementing agency. However, if the project is not found to be installed in an appropriate manner, all arrangement for the next visit of the authorized representative of the implementing agency shall be made by the vendor. There shall be no separate charges/fees for the inspections. The inspection shall be broadly governed by the following mechanism:

- 2.18.1 After complete installation of the system, the Bidders shall immediately intimate to DISCOM/implementing agency in writing for such inspections. The DISCOM/implementing agency will complete the inspection of the PV system within 15 days days of the receipt of the intimation. Visual inspection shall be carried for 100% of SPV systems. All cost pertaining to this inspection shall be borne by the implementing agency.
- 2.18.2 The material/installation found sub-standard or faulty is to be replaced by the bidder with new material as per the specifications. The systems shall be offered for inspection again after necessary rectification. Expenses for such re-inspection shall be borne by the Bidders. DISCOM at its discretion may also pick up samples from the lot of systems being supplied by the vendor at random from the warehouse for quality check only. The samples picked up will be tested for acceptance test as decided by DISCOM at MNRE/ Government approved laboratory in presence of representatives of supplier and DISCOM as per relevant IEC/IS/BIS/ DISCOM specifications.
- 2.18.3 The test results will be binding on the suppliers and DISCOM, in general will not allow re-sampling. If the material fails in any of the acceptance tests carried out, those components that fail the test shall be rejected, and the Bidder shall have to supply and install the new component as per the

specifications. The loss of generation during such time when the system is taken away for testing shall be at the cost of the Bidder, who shall compensate the Beneficiary for such loss of generation as per the pro-rata PR as per RFP.

- 2.18.4 The Bidders will offer Solar PV Systems for inspection at their site/warehouse by MNRE or DISCOMS or its authorized quality inspection agency. MNRE/DISCOM may carry out random testing/inspection of SPV systems at the site. However, all costs towards such inspection shall be borne by MNRE/implementing agency
- 2.18.5 DISCOM reserves the right to inspect any number of SPV systems, at the addresses of the beneficiaries given by the Bidders. Pre-dispatch inspection of the components is not mandatory as 100% visual inspection is being carried out by the implementing agencies and declaration for DCR modules is being furnished by the bidder. However, pre-dispatch inspection may be carried out by the implementing agency at the works of OEM (Original Equipment Manufacturer), where SPV (Solar Photovoltaic) panels are being manufactured. Any cost towards pre-dispatch inspection shall be solely borne by the implementing agency. It shall be the utmost duty of the implementing agency that pre-dispatch inspection, if being done, shall not cause delay in implementation of the project and be a basis of extension request/complaints from the vendors of manufacturers.
- 2.18.6 **Cost of inspection:** All the expenses related to inspection team like lodging, boarding, travelling, air tickets to be borne by the State Implementing Agency.

2.19 SETTLEMENT OF DISPUTE

- 2.19.1 All disputes and differences arising out of or under the contract including, however, without prejudice to the generality of the aforesaid, any question regarding the existence, validity or termination, in respect thereof, the parties at the first instance shall endeavour to resolve such dispute or differences amicably by mutual consultation.
- 2.19.2 If the parties fail to resolve, the disputes or differences amicably by mutual consent, within 45 days of its arising, the disputes or differences shall be referred to arbitration either party may refer the disputes or differences to arbitration as provided hereinafter, by giving notice in writing to the other party of its intention to refer the disputes or differences to arbitration and such arbitration proceedings shall commence with the receipt of the aforesaid notice by the other party. Any dispute in respect of which a notice of intention to refer the same to arbitration has been given in terms of sub **Clause No. 2.22**, shall be finally settled by arbitration.
- 2.19.3 **IN CASE THE CONTRACTOR IS A PUBLIC SECTOR ENTERPRISE OR A GOVERNMENT DEPARTMENT.**
In case the Contractor is a Public Sector Enterprise or a Government Department, the dispute shall be referred by either party for Arbitration to the sole Arbitrator to be nominated by the **Secretary (Power)**, of the Odisha.
- 2.19.4 **IN ALL OTHER CASES**

- i. In case the contractor is not a public sector enterprise or a Govt. Deptt. And in all other cases,

any dispute referred to arbitration by a party shall be heard by an arbitration panel composed of three arbitrators, in accordance with the provisions as set forth below.

- ii. The Implementing Agency and the Contractor shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the two arbitrators do not succeed in appointing a third arbitrator within twenty (20) days after the latter of the two arbitrators has been appointed, the third arbitrator shall, at the request of either party, be appointed by the Appointing Authority for third arbitrator who shall be the Secretary (Power), of the State.
 - iii. If one party fails to appoint its arbitrator within thirty-two (32) days after the other party has named its arbitrator, the party which has named an arbitrator may request the Appointing Authority to appoint the second arbitrator.
 - iv. If for any reason an arbitrator is unable to perform its function, the mandate of the Arbitrator shall terminate in accordance with the provisions of applicable laws and a substitute shall be appointed in the same manner as the original arbitrator.
 - v. The venue of arbitration shall be Odisha or a place of mutual consent. The provisions of Arbitration and Conciliation Act, 1996, as amended from time to time shall govern the Arbitration proceedings conducted in respect of the disputes and the differences arising out of or under the contract, except to the extent, otherwise agreed herein by the parties.
 - vi. The decision of a majority of the arbitrators (or of the third arbitrator chairing the arbitration panel, if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction as decree of the court. The parties thereby waive any objections to or claims of immunity from such enforcement.
 - vii. The arbitrator(s) shall give Honorarium as per the extant rules of the govt.
- 2.19.5 Notwithstanding any reference to the arbitration herein, the parties shall continue to perform their respective obligations under the agreement unless they otherwise agree.

2.19.6 Cost of arbitration shall be equally shared between the Parties.

2.20 FORCE MAJEURE

2.20.1 Notwithstanding the provisions of clauses contained in this RFP document; the contractor shall not be liable to forfeit (a) PBG for delay and (b) termination of contract; if he/she is unable to fulfil his obligation under this contract due to force majeure conditions.

2.20.2 For purpose of this clause, "Force Majeure" means an event beyond the control of the contractor and not involving the contractor's fault or negligence and not foreseeable, either in its sovereign or contractual capacity. Such events may include but are not restricted to Acts of God, wars or

revolutions, fires, floods, epidemics, quarantine restrictions, Grid Problems/ shutdowns and fright embargoes etc. Whether a “Force majeure” situation exists or not, shall be decided by [Implementing Agency *and MNRE*], this decision shall be final and binding on the contractor, and all other concerned.

- 2.20.3 In the event that the contractor is not able to perform his obligations under this contract on account of force majeure, he will be relieved of his obligations during the force majeure period. In the event that such force majeure extends beyond Six (06) months, Implementing Agency has the right to terminate the contract in which case, the PBG shall be refunded to the vendor.
- 2.20.4 If a force majeure situation arises, the contractor shall notify Implementing Agency in writing promptly, not later than 14 days from the date such situation arises. The contractor shall notify Implementing Agency not later than 3 days of cessation of force majeure conditions. After examining the cases, Implementing Agency shall decide and grant suitable additional time for the completion of the work, if required.

2.21 LANGUAGE

All documents, drawings, instructions, design data, calculations, operation, maintenance and safety manuals, reports, labels and any other data shall be in English Language only. The contract agreement and all correspondence between Implementing Agency and the bidder shall be in English language. O&M manual and warranty card should be in English & local languages.

2.22 OTHER CONDITIONS

- 2.22.1 The Empanelled Vendor shall not transfer, assign or sublet the work under this contract or any substantial part thereof to any other party without the prior consent of Implementing Agency in writing.
- 2.22.2 The Empanelled Vendor or its subcontractors shall not display the photographs of the work and not take advantage through publicity of the work without written permission of Implementing Agency / consumer.
- 2.22.3 The Empanelled Vendor or its subcontractors shall not make any other use of any of the documents or information of this contract, except for the purposes of performing the contract.
- 2.22.4 Implementing Agency will not be bound by any Power of Attorney granted/ issued by the Empanelled Vendor or its subcontractors or by any change in the composition of the firm made during or subsequent to the execution of the contract. However, recognition to such Power of Attorney and change (if any) may be given by Implementing Agency after obtaining proper legal advice, the cost of which will be chargeable to the Empanelled Vendor concerned.

2.23 SUCCESSORS AND ASSIGNEES:

In case the Implementing Agency or Empanelled Vendor may undergo any merger or amalgamation or a scheme of arrangement or similar re-organization & this contract is assigned to any entity(ies) partly or wholly, the contract shall be binding mutatis mutandis upon the successor entities & shall continue to remain valid with respect to obligation of the successor entities.

2.24 SEVERABILITY:

It is stated that each paragraph, clause, sub-clause, schedule or annexure of this contract shall be deemed severable & 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 & effect.

2.25 COUNTERPARTS:

This contract may be executed in one or more counterparts, each of which shall be deemed an original & all of which collectively shall be deemed one of the same instruments.

2.26 RIGHTS & REMEDIES UNDER THE CONTRACT ONLY FOR THE PARTIES

This contract is not intended & shall not be construed to confer on any person other than the Implementing Agency & Empanelled Vendor hereto, any rights and / or remedies herein.

2.27 CORRESPONDENCE

Bidder requiring any Techno-Commercial clarification of the bid documents may contact by Phone No/Email ID

| Name & Designation | Contact Number | Email id |
|--|----------------|--|
| Chandan Singh Head-Customer Services | 9971394928 | chandan.singh@tpcentralodisha.com |
| Imran Ahmad HoG-Procurement (Commercial Services) | 9958294855 | imran.ahmad@tpcentralodisha.com |
| Rajesh Kumar Patra DSM-Commercial | 7978819485 | rajesh.patra@tpcentralodisha.com |
| Arijeet Choudhury LE-Procurement | 9871432126 | arijeet.choudhury@tpcentralodisha.com |

Verbal clarifications and information given by the Implementing Agency or its employees or its Representatives shall not be in any way entertained.

Implementing Agency's role is limited to selection of vendors and disbursement of CFA after successful installation of the solar PV plant. The vendor will be solely responsible for plant performance and maintenance and any liability arising on this account shall lie solely with the vendors, provided the beneficiary has given proper access and facilitation to the vendor for regular O&M and there has not been alteration in solar irradiance due to alteration in building or its surrounding over which the vendor has no control.

SECTION – II

[Bid Evaluation Criteria and CFA Disbursement]

1. EVALUATION CRITERIA AND CFA DISBURSEMENT

1.1 BID EVALUATION AND CFA DISBURSEMENT

BID EVALUATION

The evaluation process comprises the following four steps:

| | |
|-----------------|--|
| Step I | Responsiveness check of Techno Commercial Bid |
| Step II | Evaluation of Bidder’s fulfilment of Techno-Financial Eligibility Criteria as per Clause 5.5 of Section-I |
| Step III | Evaluation of Price Bid for all Techno-Commercial Qualified Bidders |
| Step IV | Successful Bidders(s) selection /empanelment |

1.2 RESPONSIVENESS CHECK OF TECHNO COMMERCIAL BID

The Techno-Commercial Bid submitted by Bidders shall be scrutinized to establish responsiveness to the requirements laid down in the RFP subject to **Clause 5.5 of Section-I**. Any of the following may cause the Bid to be considered “*Non-responsive*”, at the sole discretion of TPCODL:

- i. Bids that are incomplete, i.e. Not accompanied by any of the applicable formats inter alia covering letter, power of attorney supported by a board resolution, Bid Bond, “Bid Security Declaration Letter” on non-judicial stamp paper. etc.
- ii. Bid not signed by authorized signatory and /or stamped in the manner indicated in this RFP.
- iii. Material inconsistencies in the information /documents submitted by the Bidder, affecting the Eligibility Criteria.
- iv. Information not submitted in the formats specified in this RFP.
- v. Bid being conditional in nature.
- vi. Bid not received by the Bid Deadline.
- vii. Bid having Conflict of Interest.
- viii. More than one Member of a Bidding Company using the credentials of the same Parent Company /Affiliate.
- ix. Bidder delaying in submission of additional information or clarifications sought by TPCODL as applicable.
- x. Bidder makes any misrepresentation.

Each Bid shall be checked for compliance with the submission requirements set forth in this RFP before the evaluation of Bidder’s fulfilment of Eligibility Criteria is taken up. **Clause 5.5 of Section-I** shall be used to check whether each Bidder meets the stipulated requirement.

1.3 PRELIMINARY EXAMINATION

1.3.1 The TPCODL will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed and stamped and whether the Bids are otherwise in order.

1.3.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit

price and the total Amount that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total amount shall be corrected. If there is a discrepancy between words and figures, the amount written in words will prevail.

2 EVALUATION OF BIDDER'S FULFILMENT OF ELIGIBILITY CRITERIA

2.1 Evaluation of Bidder's Eligibility will be carried out based on the information furnished by the Bidder as per the prescribed Formats and related documentary evidence in support of meeting the Eligibility Criteria as specified in **Clause 5.5 of Section-I**. Non-availability of information and related documentary evidence for the satisfaction of Eligibility Criteria may cause the Bid non-responsive.

2.2 EVALUATION OF PRICE BID

Price Bid (s) of the Qualified Bidders shall be opened online in presence of the representatives of such Qualified Bidders, who wish to be present, on a date as may be intimated by TPCODL to the Bidders through TPCODL: website ARIBA Portal. The evaluation of Price Bid shall be carried out based on the information furnished in Financial Bid (Price Bid). The Price Bid submitted by the Bidders shall be scrutinized to ensure conformity with the RFP. Any Bid not meeting any of the requirements of this RFP may cause the Bid to be considered "**Non-responsive**" at the sole decision of the TPCODL.

2.2.1 PART-A, PART-B, PART-C, PART-D, PART-E & Part-F:

- i. The Price bids for the CAPEX **PART-A, PART-B, PART-C, PART-D, PART-E & Part-F** shall be evaluated separately and lowest quoted bidder in each category shall be declared as L1 and CFA will be determined on the basis of discovered rate and prevailing Benchmark Cost for that respective category, whichever is lower. DISCOMs may also invite separate rate discovery as prescribed in **Format A** for different Sector/Locations/Districts/cluster segregated based on terrains (Hilly/Plan), Geo-Political constrains, Transportation Cost, Availability of Skilled and Non-Skilled Manpower and Raw Materials etc.
- ii. The Project Cost shall be calculated up to two decimal places. However, in case of a tie, capacity shall be allocated to the bidder having **the maximum proposed capacity as per the covering letter**.
- iii. Total Project cost shall be considered during evaluation as mentioned in **formats annexed with this RFP**.

2.3 SUCCESSFUL BIDDER(S) SELECTION

- i. Bids qualifying in **Clause 5.5 of Section-I** shall only be evaluated in this stage.
- ii. Project Cost quoted in all Price Bids of Qualified Bidders shall be ranked from the lowest to the highest for **PART-A, PART-B, PART-C, PART-D, PART-E & Part-F** separately.
- iii. **Allocation of Capacity and Empanelment of Vendors for CAPEX PART-A, PART-B, PART-C, PART-D, PART-E & Part-F.**

2.3.1 PART-A, PART-B, PART-C, PART-D, PART-E & Part-F: Based on the price bid quoted by the bidders, Implementing Agency shall arrange the bids in the ascending order i.e. L1, L2, L3, __ __ (L1 being the lowest quote).

- i. Lowest bidder will be declared as the L1 against each Part/Category. The L1 bidder's quoted capacity

shall be allocated to the L1 successful bidder subject to the condition that it should not be less than 10% of aggregated capacity for respective part/category. On acceptance, capacity will be allocated to the L1 bidder. In case L-1 bidder did not accept the maximum bid capacity or 10% of L1 aggregated capacity for the respective part/category, then Submitted Bank Guarantee will be encashed, and L-1 bidder shall be blacklisted from all the Government Tenders for 5 Years.

- ii. The bids will be arranged in ascending order Starting from L1, L2, L3..... The Approved Lowest Rate against each part/category will be the project cost and bidder will be allocated their quoted capacity as on the cover letter. The remaining bidders, i.e. L2, L3, L4....., will be given 14 Days' time to submit the letter of acceptance of L1 Rate. The bidders, who provide their consent to work on L1 Rate, will be allocated their quoted capacity in the order of merit, till the entire capacity is exhausted. If quantity/capacity is left unallocated in any category, DISCOM reserves the right to reallocate the left-over capacity to the bidders' subject to their consent and at the sole discretion of TPCODL.
- iii. If the implementing agency is going for price discovery for different/special categories, the same may be included under this section and accordingly the forms and formats may be referred.
- iv. The selection process shall stand completed once the Tender Capacity has been achieved through the summation of the capacity offered by the Successful Bidders.
- v. At any step during the selection of Successful Bidder(s) in accordance with the provision laid down in RFP, the TPCODL reserves the right to increase/decrease the Tender Capacity of the capacity indicated to achieve the balance Tender Capacity and select the Successful Bidder with the lowest Project Cost/lowest evaluated price amongst the remaining Bids.
- vi. The Letter(s) of Intent (LoI) shall be issued to all such Empanelled Vendors(s) selected as per the provisions laid down in RFP document.
- vii. Each Empanelled Vendor shall acknowledge the LoI and return duplicate copy with signature of the authorized signatory of the Empanelled Vendor to the Implementing Agency within Fifteen (15) days of issue of LoI.
- viii. If the Empanelled Vendor, to whom the LoI has been issued does not fulfil any of the conditions specified in Bid document, the Implementing Agency reserves the right to annul/cancel the award of the LoI of such Empanelled Vendor.
- ix. The vendors have to submit the Performance Bank Guarantee (PGB) of appropriate value as per **Clause No. 10.10 (As per Format-4)** alongwith submission of signed copy of LoI for further issuance of Letter of Allocation.
- x. The Implementing Agency at its own discretion, has the right to reject any or all the Bids without assigning any reason whatsoever, at its sole discretion.

Duration of Empanelment

The Successful Bidders selected as described in **Clause No.3 of Section-II** above shall be empanelled for one year or upto 20 Months from Date of MNRE Sanction 19th January 2022, whichever is earlier and [Insert the name of State Implementing Agency] shall be issued Letter of Allocation (LOA) indicating the allocated capacity & Project Cost etc.

2.4 INCREASE/DECREASE OF BIDDER ALLOCATED CAPACITY

- i. Implementing Agency reserves the right to increase/decrease the Bidder(s) Allocated Capacity at the sole discretion of Implementing Agency.
- ii. In case capacity is enhanced by Implementing Agency as per **Clause No. 2.4 of Section-II** above, Empanelled Vendor shall submit the equivalent amount of PBG to Implementing Agency within 15 days from the date of issue of LoA, failing which sanctioned capacity shall stand cancelled.

2.5 TRANSFER OF CAPACITY

Capacity can be transferred from PART A, B, C, D, E & F or vice-versa, in such case lowest rate of that part shall be the reference price for capacity execution.

Note: It is the discretion of Implementing Agency to increase/decrease/transfer the Empanelled Vendor allocated capacity on bidder's request.

3 NOTIFICATION TO SUCCESSFUL BIDDERS

The name and contact details of Empanelled Vendors shall be notified indicating the allocated capacity and the offered price on website of respective Implementing Agency and also shall be notified individually through letter of allocation.

4 PROJECT ALLOCATION AND SANCTION

- 4.1 The identification of the projects (roof tops) at the time of bidding is not mandatory. The Bidders, however, in their own interest are advised to make a preliminary survey of availability of roof tops for which they intend to Bid and as prescribed in the RFP, as well as issue of Grid connectivity, as non-availability of roof tops and non-completion of other formalities after allocation of project will result in forfeiture of Bid Bond/PBG amount submitted by them.
- 4.2 The Successful Bidders selected as described in **Clause No. 3 of Section-II** above shall be empanelled for timeline specified in the Work order or 15 months from Date of MNRE Sanction, whichever is earlier. Implementing Agency shall be issued Letter of Allocation (LOA) indicating the allocated capacity & Project Cost etc.
- 4.3 For identification of projects, Implementing Agency may provide help. However, the entire responsibility of finding the buildings lies with the Bidder.
- 4.4 Documentation like finalizing the Project report and entering into agreements with the buildings/rooftops owners lies with the Empanelled Vendor within the above-mentioned time frame even for the buildings/rooftops identified by Implementing Agency for preferential installation.
- 4.5 After the Project Consent Documents have been submitted by the Empanelled Vendor/ Project Developer and accepted by Implementing Agency will issue the Consent Letter(s) for the Project (s)

indicating the CFA amount(s) which will be disbursed in line with the provisions of the RFP document. The Empanelled Vendor shall complete the design, engineering, manufacture, supply, storage, civil work, erection, testing & commissioning of each project 6 months from the date of issue of the Consent Letter or upto 15 Months from Date of MNRE Sanction 19th January 2022 whichever is earlier from the date of issuance of MNRE capacity Allocation Letter.

- 4.6** If the Empanelled Vendor fails to commission the sanctioned project within specified time, no CFA will be disbursed by Implementing Agency.

5 CFA DISBURSEMENT & PAYMENT CLAUSES:

5.1 For PART-A, Part-B, Part-C, Part-D, Part-E & Part-F

The vendor shall be allowed to charge only balance of the project cost, excluding CFA amount, from the consumer. The proportion of admissible CFA shall be disbursed by Implementing Agency to the empanelled vendor directly after successful commissioning of the project as per MNRE Operational Guidelines issued vide OM No. 318/ 331/2017- Grid Connected Rooftop Dated 20th August 2020 and their amendments. The admissible CFA would be 40% of the benchmark cost or tender cost, whichever is lower, for capacity up to 3 kW. For project capacity above 3 kWp and up to 10 kWp, the admissible CFA would be 20% of project cost or the MNRE benchmark cost, whichever is lower. For CFA calculation, the project capacity would be decided based on PV array capacity or inverter capacity, whichever is lower. The consumers are allowed to install the capacity higher than 10 KW, however, the quantum of CFA would be limited to 10 KW capacity only. The maximum permissible limit for group housing societies would be up to 500 kW and the admissible CFA would be 20% of the benchmark cost or tender cost, whichever is lower.

The net amount of project cost (i.e. project cost - CFA) shall be paid by the concerned roof top owner to any of the empanelled vendors as per the following methodology:

- 20% payment in advance after signing of agreement.
- 20% payment after installation of structure
- 20% payment after installation of SPV modules and inverters at site
- 20% payment after completing plant installation (including net-metering) and submission of written inspection request to the implementing agency
- Final 20% payment after commissioning of the plant and injection of power to the grid.

It shall be noted that beneficiary/customer shall be solely responsible for financial transaction with the vendor for the net of CFA (Total cost – Admissible CFA) amount. The beneficiary/customer are advised to thoroughly check the documents/claims of the vendors and shall make only online payments wherever required. Implementing Agency or MNRE in no way shall be responsible for disputes arising out of payments of agreements between vendor and the beneficiary.

- 5.2** The CFA as calculated under **Clause No. 5 of Section-II** for Parts under CAPEX Model will be released on submission of following documents-

- i. Joint Commissioning Report (JCR) as per **Annexure-O**.
- ii. Copy of Insurance Policies as per Clause No. 2.8 of Section-II

- iii. Claim Letter as per the **Annexure - M**.
- iv. Guarantee certificate on Letter Head of the Vendor.
- v. Geo-coordinates and photos of the site

5.3 The CFA shall be released by Implementing Agency, only after receipt of the same from MNRE.

5.4 The CFA shall be released to the Vendor only after the completion and successful commissioning of the Project(s) as per terms & conditions vide **Clause No. 5 of Section-II**.

5.5 The whole or part of the CFA shall be recovered from the Vendor's PBG or future Payments (to be released), in case of violation of any Terms & Conditions of MNRE/ Implementing Agency.

6 OTHER CONDITIONS

Bidder has to obtain all the necessary approvals/Consents/Clearances required for Erection, Testing, Commissioning and O&M of the project including Grid connectivity. Implementing Agency shall not have any responsibility in this regard.

7. BID BOND/EMD AND PROCESSING FEE SUBMISSION:

As per **Bid Information Sheet**, Bid bond/EMD shall be submitted separately for the offered capacity in a separate envelop along with processing fee & other details. However, MSMEs are exempted from submission of Bid Security /EMD / Bid Bond and "Bid Security Declaration Letter" on non-judicial stamp paper.

8. TAX EXEMPTIONS:

Price bids are invited along with Taxes and duties mentioned separately. However, Tax exemptions including certificates of any sort, if available may be dealt with the concerned Department of Govt. of India/ Odisha by the bidder. Implementing Agency in no case will be responsible for providing any tax exemptions to the bidder.

9. Eligibility of standalone system:

Standalone system is not allowed under this scheme. The system should be Grid-connected Rooftop Solar System.

10. Requirement of approvals on makes of the Components:

The Modules and Cells should be manufactured in India and should be complied with the prevailing Approved List of Models and Manufacturers of Solar Photovoltaic Modules (*Requirement for Compulsory Registration*) Order 2019 - Implementation issued vide OM NO. 283/54/2018-GRID SOLAR -Part (I) Dated 10th March 2021 and subsequent amendments Rest of the components can be procured from any source. However, these items should meet the Technical specification and standards mentioned in RFP. A reference bidders' Declaration format associated with Implementation of ALMM (**Annexure T**) order will also be required to be signed by the bidder as per the format provided vide MNRE OM No. 283/54/2018-GRID SOLAR -Part (I) Dated 2nd June 2021.

11. OPERATION OF THE SYSTEM DURING WEEKENDS AND GENERAL HOLIDAYS AND CALCULATION OF CUF

N/A

12. LIQUIDATED DAMAGES (LD) FOR DELAY IN PROJECT IMPLEMENTATION

- 12.1 Implementing Agency will issue the consent letter(s) for the Project (s) indicating the CFA amount(s) which will be disbursed in line with the provisions of the RFP document. The Bidder shall complete Design, Engineering, Manufacture, Supply, storage, civil work, erection, testing & commissioning of each project within stipulated timeline. (Excluding any Extension any further extension), whichever is earlier.
- 12.2 If the bidder fails to commission the sanctioned project within specified time, the project will get cancelled and CFA will not be disbursed by Implementing Agency.

13 TIME OF COMPLETION OF SANCTIONED CAPACITY

- 13.1 The Empanelled Vendor shall complete the roofs identification, submission of project sanction documents as per the requirement of Implementing Agency, Design, Engineering, Manufacture, Supply, storage, civil work, erection, testing & commissioning of each project within 20 months from the date of issue of Empanelment Letter or 24 Months from date of sanction Order from MNRE to DISCOM i.e. (Excluding any Extension any further extension), whichever is earlier.
- 13.2 The period of execution given in time schedule includes the time required for mobilization as well as testing, rectifications if any, re-testing and completion in all respects to the entire satisfaction of the Engineer-in- Charge.

14 UPDATING THE PROJECT PROGRESS ON MONTHLY BASIS

Empanelled Vendor's authorized representative, in whose name power of attorney has been executed and submitted along with the bid, shall update the project progress on biweekly basis in the consent letter. Empanelled Vendor should update the info as per the requirement. Non-updating of the progress shall be considered as no progress and shall attract punitive actions as per the relevant provision of the Contract. However, the decision of Engineer-in - charge shall be final in this regard.

15 INSPECTION AND AUDIT BY THE GOVERNMENT

The Empanelled vendor shall permit the Implementing Agency to inspect the site, accounts and records relating to the performance and to have them audited by auditors appointed by the Implementing Agency, if so required by the Implementing Agency any time.

16 COMMISSIONING /COMPLETION CERTIFICATE:

Application for completion/commissioning certificate:

When the Empanelled Vendor fulfils his obligation under the Contract, he shall be eligible to apply for Completion/Commissioning Certificate. The Engineer- in-Charge shall normally issue the Completion Certificate to the Empanelled Vendor within one month after receiving any application therefore from the Empanelled Vendor after verifying from the completion documents and satisfying himself that the work has been completed in accordance with and as set out in Contract documents. The Empanelled Vendor, after obtaining the Completion Certificate, is eligible to avail the CFA as per the **Clause No. 5 of Section-II**.

17 DOCUMENT SUBMISSION FOR ISSUE OF COMMISSIONING/ COMPLETION CERTIFICATE:

For the purpose of **Clause No. 16 of Section-II** the following documents will be deemed to form the completion documents:

- i. Checklist for inspection of Roof top power plants as per Implementing Agency format.
- ii. Project completion/satisfaction certificate from roof top owner's/project developers.

18 DEDUCTIONS FROM THE CONTRACT PRICE:

18.1 All costs, damages or expenses which Implementing Agency may have paid or incurred, which under the provisions of the Contract, the Empanelled Vendor is liable/will be liable, will be claimed by the Implementing Agency. All such claims shall be billed by the Implementing Agency to the Contractor within 15 (fifteen) days of the receipt of the payment request and if not paid by the Empanelled Vendor within the said period, the Implementing Agency may, then, deduct the amount from any moneys due i.e., PBG or becoming due to the contractor or Empanelled Vendor under the contract or may be recovered by actions of law or otherwise, if the Empanelled Vendor fails to satisfy the Implementing Agency of such claims.

19 CORRUPT OR FRAUDULENT PRACTICES

The Implementing Agency requires that Empanelled Vendors/ Contractors should follow the highest standard of ethics during the execution of contract. In pursuance of this policy, the Implementing Agency defines, for the purposes of this provision, the terms set forth as follows:

- 19.1 **“corrupt practice”** means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the bid process or in contract execution; and
- 19.2 **“fraudulent practice”** means a misrepresentation of facts in order to influence a bid process or the execution of a contract to the detriment of the Implementing Agency / Govt scheme, and includes collusive practice among Bidders (prior to or after Bid submission) designed to establish Bid prices at artificial non- competitive levels and to deprive them of the benefits of free and open competition;
- 19.3 A firm will be declared ineligible/debarred, either indefinitely or for a specific period of time, a GOVT contract if at any time it is found that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Government/ Implementing Agency schemes.

20 DEBARRED FROM PARTICIPATING IN TPCODL’S TENDER

20.1 TPCODL 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 Bidders may be debarred from participating in Implementing Agency’s any future tender for a period as decided by TPCODL.

SECTION – III

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

The proposed projects shall be commissioned as per the technical specifications given below. Any shortcomings will lead to cancellation of CFA in full or part as decided by Implementing Agency. Domestic Modules are to be used failing which it will be assumed that system is not matching the requirement of the scheme and bidder's PBG shall be forfeited. Competent Authority's decision will be final and binding on the bidder.

1. DEFINITION

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

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

1. Solar PV modules

- 1.1. The PV modules and Solar Cell used should be made in India.
- 1.2. The PV modules used must qualify to the latest edition of IEC standards or equivalent BIS standards, i.e. IEC 61215/IS14286, IEC 61853-Part I/IS 16170-Part I, IEC 61730 Part-1 & Part 2 and IEC 62804 (PID). For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC 61701/IS 61701.
- 1.3. The rated power of solar PV module shall have maximum tolerance up to +3%.
- 1.4. The peak-power point current of any supplied module string (series connected modules) shall not vary by +1% from the respective arithmetic means for all modules and/or for all module strings (connected to the same MPPT), as the case may be.
- 1.5. The peak-power point voltage of any supplied module string (series connected modules) shall not vary by + 2% from the respective arithmetic means for all modules and/or for all module strings (connected to the same MPPT), as the case may be.
- 1.6. The temperature co-efficient power of the PV module shall be equal to or better than -0.45%/°C.
- 1.7. Solar PV modules of minimum capacity 250 Wp to be used.
- 1.8. The PV Module efficiency should be minimum 16%.
- 1.9. Solar PV modules of minimum fill factor 75%, to be used.
- 1.10. All electrical parameters at STC shall have to be provided

- 1.11. The PV modules shall be equipped with IP 65 or better protection level junction box with required numbers of bypass diodes of appropriate rating and appropriately sized output power cable of symmetric length with MC4 or equivalent solar connectors. The IP level for protection may be chosen based on following conditions:
 - i. An IP 65 rated enclosure is suitable for most outdoor enclosures that won't encounter extreme weather such as flooding.
 - ii. An IP 67 rated enclosure is suitable at locations which may encounter temporary submersion at depths of up to one meter.
 - iii. An IP 68 enclosure is recommended if there may exist situations of submergence for extended periods of time and at substantial depths.
- 1.12. All PV modules should carry a performance warranty of >90% during the first 10 years, and >80% during the next 15 years. Further, module shall have performance warranty of >97% during the first year of installation—degradation of the module below 1 % per annum.
- 1.13. The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a period not less than five (05) years from the date of commissioning:
- 1.14. Defects and/or failures due to manufacturing.
- 1.15. Defects and/or failures due to quality of materials.
- 1.16. Nonconformity to specifications due to faulty manufacturing and/or inspection processes. If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the Owners sole option.
- 1.17. PV modules must be tested and approved by one of the NABL accredited and BIS approved test centers.
- 1.18. Modules deployed must use a RF identification tag laminated inside the glass. The following information must be mentioned in the RFID used on each module:
 - i. Name of the manufacturer of the PV module
 - ii. Name of the manufacturer of Solar Cells.
 - iii. Month & year of the manufacture (separate for solar cells and modules)
 - iv. Country of origin (separately for solar cells and module)
 - v. I-V curve for the module Wattage, I_m , V_m and FF for the module
 - vi. Unique Serial No and Model No of the module
 - vii. Date and year of obtaining IEC PV module qualification certificate.
 - viii. Name of the test lab issuing IEC certificate.
 - ix. Other relevant information on traceability of solar cells and module as per ISO 9001 and ISO 14001.
 - x. Nominal wattage +3%.
 - xi. Brand Name, if applicable.
- 1.19. Other details as per IS/IEC 61730-1 clause 11 should be provided at appropriate place. In addition to the above, the following information should also be provided:
 - i. The actual Power Output P_{max} shall be mentioned on the label pasted on the back side of PV Module.
 - ii. The Maximum system voltage for which the module is suitable to be provided on the back sheet of the module.

- iii. Polarity of terminals or leads (colour coding is permissible) on junction Box housing near cable entry or cable and connector.
- 1.20. Unique Serial No, Model No, Name of Manufacturer, Manufacturing year, Make in India logo and module wattage details should be displayed inside the laminated glass.

2. Inverter/PCU

- 2.1. Inverters/PCU should comply with applicable IEC/equivalent BIS standard for efficiency measurements and environmental tests as per standard codes IEC 61683/IS 61683, IS 16221 (Part 2), IS 16169 and IEC 60068-2(1,2,14,30) /Equivalent BIS Std.
- 2.2. Maximum Power Point Tracker (MPPT) shall be integrated in the inverter/PCU to maximize energy drawn from the array. Charge controller (if any) / MPPT units environmental testing should qualify IEC 60068-2(1, 2, 14, 30)/Equivalent BIS standard. The junction boxes/enclosures should be IP 65 or better (for outdoor)/ IP 54 or better (indoor) and as per IEC 529 Specifications.
- 2.3. All inverters/PCUs shall be IEC 61000 compliant for electromagnetic compatibility, harmonics, Surge, etc.
- 2.4. The PCU/ inverter shall have overloading capacity of minimum 10%.
- 2.5. Typical technical features of the inverter shall be as follows-
 - i. Switching devices: IGBT/MOSFET
 - ii. Control: Microprocessor/DSP
 - iii. Nominal AC output voltage and frequency: as per CEA/State regulations
 - iv. Output frequency: 50 Hz
 - v. Grid Frequency Synchronization range: as per CEA/State Regulations
 - vi. Ambient temperature considered: -20°C to 60°C
 - vii. Humidity: 95 % Non-condensing
 - viii. Protection of Enclosure: IP-54 (Minimum) for indoor and IP-65(Minimum) for outdoor.
 - ix. Grid Frequency Tolerance range: as per CEA/State regulations
 - x. Grid Voltage tolerance: as per CEA/State Regulations
 - xi. No-load losses: Less than 1% of rated power
 - xii. Inverter efficiency (Min.): >93% (In case of 10 kW or above with in-built galvanic isolation)
>97% (In case of 10 kW or above without inbuilt galvanic isolation)
 - xiii. Inverter efficiency (minimum): > 90% (In case of less than 10 kW)
 - xiv. THD: < 3%
 - xv. PF: > 0.9 (lag or lead)
 - xvi. Should not inject DC power more than 0.5% of full rated output at the interconnection point and comply to IEEE 519.
- 2.6. The output power factor of inverter should be suitable for all voltage ranges or sink of reactive power, inverter should have internal protection arrangement against any sustain fault in feeder line and against the lightning on feeder.
- 2.7. All the Inverters should contain the following clear and indelible Marking Label & Warning Label as per IS16221 Part II, clause 5. The equipment shall, as a minimum, be permanently marked with:
 - i. The name or trademark of the manufacturer or supplier;

- ii. A model number, name or other means to identify the equipment,
 - iii. A serial number, code or other marking allowing identification of manufacturing location and the manufacturing batch or date within a three-month time period.
 - iv. Input voltage, type of voltage (a.c. or d.c.), frequency, and maximum continuous current for each input.
 - v. Output voltage, type of voltage (a.c. or d.c.), frequency, maximum continuous current, and for a.c. outputs, either the power or power factor for each output.
 - vi. The Ingress Protection (IP) rating
- 2.8. Marking shall be located adjacent to each fuse or fuse holder, or on the fuse holder, or in another location provided that it is obvious to which fuse the marking applies, giving the fuse current rating and voltage rating for fuses that may be changed at the installed site.
- 2.9. In case the consumer is having a 3- ϕ connection, 1- ϕ /3- ϕ inverter shall be provided by the vendor as per the consumer's requirement and regulations of the State.
- 2.10. Inverter/PCU shall be capable of complete automatic operation including wake-up, synchronization & shutdown.
- 2.11. The Inverter should have a provision of remote monitoring of inverter data through sim card. Required website/mobile app platform, where the user (Consumer) can access the data, should be provided/explained to consumer while installation. Additionally, if inverter has the facility of in-built wi-fi module, that should also be explained to the consumer. On demand, Inverter should also have provision to feed the data to the remote monitoring server using relevant API/ protocols. All the inverter data should be available for monitoring by giving web access.
- 2.12. For CFA calculation, minimum of following two shall be considered:
- i. Solar PV array capacity in KWp
 - ii. Inverter Capacity in KW
- 2.13. Integration of PV Power with Grid & Grid Islanding:
- i. The output power from SPV would be fed to the inverters/PCU which converts DC produced by SPV array to AC and feeds it into the main electricity grid after synchronization.
 - ii. In the event of a power failure on the electric grid, it is required that any independent power-producing inverters attached to the grid turn off in a short period of time. This prevents the DC-to-AC inverters from continuing to feed power into small sections of the grid, known as "islands." Powered islands present a risk to workers who may expect the area to be unpowered, and they may also damage grid-tied equipment. The Rooftop PV system shall be equipped with islanding protection. In addition to disconnection from the grid (due to islanding protection) disconnection due to under and over voltage conditions shall also be provided, if not available in inverter.
 - iii. MCB/MCCB or a manual isolation switch, besides automatic disconnection to grid, would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance. This switch shall be locked by the utility personnel.

3. Module Mounting Structure (MMS):

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

- 3.2. Module mounting structures can be made from three types of materials. They are Hot Dip Galvanized Iron, Aluminium and Hot Dip Galvanized Mild Steel (MS). However, MS will be preferred for raised structure.
- 3.3. MMS Steel shall be as per latest IS 2062:2011 and galvanization of the mounting structure shall be in compliance of latest IS 4759. MMS Aluminium shall be as per AA6063 T6. For Aluminium structures, necessary protection towards rusting need to be provided either by coating or anodization.
- 3.4. All bolts, nuts, fasteners shall be of stainless steel of grade SS 304 or hot dip galvanized, panel mounting clamps shall be of aluminium and must sustain the adverse climatic conditions. Structural material shall be corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts.
- 3.5. The module mounting structures should have angle of inclination as per the site conditions to take maximum insolation and complete shadow-free operation during generation hours. However, to accommodate more capacity the angle of inclination may be reduced until the plant meets the specified performance ratio requirements.
- 3.6. The Mounting structure shall be so designed to withstand the speed for the wind zone of the location where a PV system is proposed to be installed. The PV array structure design shall be appropriate with a factor of safety of minimum 1.5.
- 3.7. The upper edge of the module must be covered with wind shield so as to avoid build air ingress below the module. Slight clearance must be provided on both edges (upper & lower) to allow air for cooling.
- 3.8. Suitable fastening arrangement such as grouting and calming should be provided to secure the installation against the specific wind speed. The Empanelled Agency shall be fully responsible for any damages to SPV System caused due to high wind velocity within guarantee period as per technical specification.
- 3.9. The structures shall be designed to allow easy replacement, repairing and cleaning of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels. Necessary testing provision for MMS to be made available at site.
- 3.10. Adequate spacing shall be provided between two panel frames and rows of panels to facilitate personnel protection, ease of installation, replacement, cleaning of panels and electrical maintenance.
- 3.11. The structure shall be designed to withstand operating environmental conditions for a period of minimum 25 years.
- 3.12. The Rooftop Structures maybe classified in three broad categories as follows (drawings at **Annexure-X**):
 - i. **Ballast structure**
 - a. The mounting structure must be Non-invasive ballast type and any sort of penetration of roof to be avoided.
 - b. The minimum clearance of the structure from the roof level should be in between 70-150 mm to allow ventilation for cooling, also ease of cleaning and maintenance of panels as well as cleaning of terrace.
 - c. The structures should be suitably loaded with reinforced concrete blocks of appropriate weight made out of M25 concrete mixture.

ii. Tin shed

- a. The structure design should be as per the slope of the tin shed.
- b. The inclination angle of structure can be done in two ways-
 - b.1. Parallel to the tin shed (flat keeping zero-degree tiling angle), if the slope of shed in Proper south direction
 - b.2. With same tilt angle based on the slope of tin shed to get the maximum output.
- c. The minimum clearance of the lowest point from the tin shade should be more 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.

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

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

- a. The structure shall be designed to allow easy replacement of any module and shall be in line with site requirement. The gap between module should be minimum 30MM.
- b. Base Plate – Base plate thickness of the Structure should be 5MM for this segment.
- c. Column – Structure Column should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
- d. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 70MM in Web side (y-axis) and 40MM in flange side (x-axis).
- e. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 60MM in Web side and 40MM in flange side in Lip section.
- f. Front/back bracing – The section for bracing part should be minimum 2MM thickness.
- g. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.
- h. For single portrait structure the minimum ground clearance should be 500MM.

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

- a. Base Plate – Base plate thickness of the Structure should be Minimum 6MM for this segment.
- b. Column – Structure Column should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 80MM in Web side and 50MM in flange side in Lip section.
- c. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
- d. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
- e. Front/back bracing – The section for bracing part should be minimum 2MM thickness.

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

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

- a. Base Plate – Base plate thickness of the Structure should be minimum 8 MM for this segment.
- b. Column – Structure Column thickness should be minimum 2.6MM in square hollow section (minimum 50x50) or rectangular hollow section (minimum 60x40) or 3MM in C-Channel section.
- c. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in Channel section. The minimum section should be 80MM in Web side and 50MM in flange side in Lip section.
- d. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 80MM in Web side and 50MM in flange side in Lip section.
- e. Front/back bracing – The section for bracing part should be minimum 3MM thickness.
- f. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.

D. Super elevated structure (More than 3000 MM)

D.1. Base structure

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

D.2. Upper structure of super elevated structure –

- a. Base Plate – Base plate thickness of the Structure should be minimum 5MM for this segment.
- b. Column – Structure Column should be minimum 2MM in Lip section / 3MM in Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
- c. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
- d. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 60MM in Web side and 40MM in flange side in Lip section.

- e. Front/back bracing – The section for bracing part should be minimum 2MM thickness.
 - f. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.
- D.3. If distance between two legs in X-Direction is more than 3M than sag angle/Bar should be provide for purlin to avoid deflection failure. The sag angle should be minimum 2MM thick, and bar should be minimum 12Dia.
- D.4. Degree - The Module alignment and tilt angle shell be calculated to provide the maximum annual energy output. This shall be decided on the location of array installation.
- D.5. Foundation – Foundation should be as per the roof condition; two types of the foundation can be done- either penetrating the roof or without penetrating the roof.
- a. If penetration on the roof is allowed (based on the client requirement) then minimum 12MM diameter anchor fasteners with minimum length 100MM can be 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.

3.13. Material standards:

- i. Design of foundation for mounting the structure should be as per defined standards which clearly states the Load Bearing Capacity & other relevant parameters for foundation design (As per IS 6403 / 456 / 4091 / 875).
- ii. Grade of raw material to be used for mounting the structures so that it complies the defined wind loading conditions (As per IS 875 - III) should be referred as follows (IS 2062 – for angles and channels, IS 1079 – for sheet, IS 1161 & 1239 for round pipes, IS 4923 for rectangular and square hollow section)
- iii. Test reports for the raw material should be as per IS 1852 / 808 / 2062 / 1079 / 811.
- iv. In process inspection report as per approved drawing & tolerance should be as per IS 7215.
- v. For ascertaining proper welding of structure part following should be referred:
 - a. D.P. Test (Pin Hole / Crack) (IS 822)
 - b. Weld wire grade should be of grade (ER 70 S - 6)
- vi. For ascertaining hot dip galvanizing of fabricated structure following should be referred: -
 - a. Min coating required should be as per IS 4759 & EN 1461.
 - b. Testing of galvanized material
 - Pierce Test (IS 2633)
 - Mass of Zinc (IS 6745)
 - Adhesion Test (IS 2629)
 - CuSO4 Test (IS 2633)

- Superior High-Grade Zinc Ingot should be of 99.999% purity (IS 209) (Preferably Hindustan Zinc Limited or Equivalent).
 - vii. Foundation Hardware – If using foundation bolt in foundation then it should be as per IS 5624.
- 3.14. 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, as per specification.

4. Metering

- 4.1. A Roof Top Solar (RTS) Photo Voltaic (PV) system shall consist of following energy meters:
- i. Net meter: To record import and export units
 - ii. Generation meter: To keep record for total generation of the plant.
- 4.2. The installation of meters including CTs & PTs, wherever applicable, shall be carried out by the Empanelled Vendor as per the terms, conditions and procedures laid down by the concerned SERC/DISCOMs.

5. Array Junction Boxes:

- 4.7 The junction boxes are to be provided in the PV array for termination of connecting cables. The Junction Boxes (JBs) shall be made of GRP/FRP/Powder Coated aluminum /cast aluminum alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JB's shall be such that input & output termination can be made through suitable cable glands. Suitable markings shall be provided on the bus-bars for easy identification and cable ferrules will be fitted at the cable termination points for identification.
- 4.8 Copper bus bars/terminal blocks housed in the junction box with suitable termination threads conforming to IP 65 or better standard and IEC 62208 Hinged door with EPDM rubber gasket to prevent water entry, Single /double compression cable glands should be provided.
- 4.9 Polyamide glands and MC4 Connectors may also be provided. The rating of the junction box shall be suitable with adequate safety factor to interconnect the Solar PV array.
- 4.10 Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification.
- 4.11 Junction boxes shall be mounted on the MMS such that they are easily accessible and are protected from direct sunlight and harsh weather.

5 DC Distribution Box (DCDB):

- 5.1 May not be required for small plants, if suitable arrangement is available in the inverter.
- 5.2 DC Distribution Box are to be provided to receive the DC output from the PV array field.
- 5.3 DCDBs shall be dust & vermin proof conform having IP 65 or better protection, as per site conditions.
- 5.4 The bus bars are made of EC grade copper of required size. Suitable capacity MCBs/MCCB shall be provided for controlling the DC power output to the inverter along with necessary surge arrestors. MCB shall be used for currents up to 63 Amperes, and MCCB shall be used for currents greater than 63 Amperes.

6 AC Distribution Box (ACDB):

- 6.1 AC Distribution Panel Board (DPB) shall control the AC power from inverter, and should have necessary surge arrestors, ~~if required~~. There is interconnection from ACDB to mains at LT Bus bar while in grid tied mode.
- 6.2 All switches and the circuit breakers, connectors should conform to IEC 60947:2019, part I, II and III/ IS 60947 part I, II and III.
- 6.3 The isolators, cabling work should be undertaken as part of the project.
- 6.4 All the Panel's shall be metal clad, totally enclosed, rigid, floor mounted, air -insulated, cubical type suitable for operation on $1-\phi/3-\phi$, 415 or 230 volts, 50 Hz (or voltage levels as per CEA/State regulations).
- 6.5 The panels shall be designed for minimum expected ambient temperature of 45 degree Celsius, 80 percent humidity and dusty weather.
- 6.6 All indoor panels will have protection of IP 54 or better, as per site conditions. All outdoor panels will have protection of IP 65 or better, as per site conditions.
- 6.7 Should conform to Indian Electricity Act and CEA safety regulations (till last amendment).
- 6.8 All the 415 or 230 volts (or voltage levels as per CEA/State regulations) AC devices / equipment like bus support insulators, circuit breakers, SPDs, Voltage Transformers (VTs) etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions.
 - i. Variation in supply voltage: as per CEA/State regulations
 - ii. Variation in supply frequency: as per CEA/State regulations
- 6.9 The inverter output shall have the necessary rated AC surge arrestors, ~~if required~~ and MCB/ MCCB. RCCB shall be used for successful operation of the PV system, if inverter does not have required earth fault/residual current protection.

7 Protections

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

7.1 Earthing Protection

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

7.2 Lightning Protection

- i. The SPV power plants shall be provided with lightning & over voltage protection, if required. The main aim in this protection shall be to reduce the overvoltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc.
- ii. The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors (LAs). Lightning protection should be provided as per NFC17-102:2011/IEC 62305 standard.
- iii. The protection against induced high-voltages shall be provided by the use of Metal Oxide Varistors (MOVs)/Franklin Rod type LA/Early streamer type LA.
- iv. The current carrying cable from lightning arrestor to the earth pit should have sufficient current carrying capacity according to IEC 62305. According to standard, the minimum requirement for a lightning protection system designed for class of LPS III is a 6 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.

7.3 Surge Protection

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

8 CABLES

- 8.1 All cables should conform to latest edition of IEC/equivalent BIS Standards alongwith IEC 60227/IS 694, IEC 60502/IS 1554 standards.
- 8.2 Cables should be flexible and should have good resistance to heat, cold, water, oil, abrasion etc.
- 8.3 Armored cable should be used and overall PVC type 'A' pressure extruded insulation or XLPE insulation should be there for UV protection.
- 8.4 Cables should have Multi Strand, annealed high conductivity copper conductor on DC side and copper/FRLS type Aluminum conductor on AC side. For DC cabling, multi-core cables shall not be used.
- 8.5 Cables should have operating temperature range of -10°C to +80°C and voltage rating of 660/1000 V.
- 8.6 Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop less than 2% (DC Cable losses).
- 8.7 The size of each type of AC cable selected shall be based on minimum voltage drop. However; the maximum drop shall be limited to 2%.
- 8.8 The electric cables for DC systems for rated voltage of 1500 V shall conform to BIS 17293:2020.
- 8.9 All cable/wires are to be routed in a RPVC pipe/ GI cable tray and suitably tagged and marked with proper manner by good quality ferule or by other means so that the cable is easily identified.
- 8.10 All cable trays including covers to be provided.
- 8.11 Thermo-plastic clamps to be used to clamp the cables and conduits, at intervals not exceeding 50 cm.
- 8.12 Size of neutral wire shall be equal to the size of phase wires, in a three phase system.
- 8.13 The Cable should be so selected that it should be compatible up to the life of the solar PV panels i.e. 25 years.

9 DRAWINGS & MANUALS:

- 9.1 Operation & Maintenance manual/user manual, Engineering and Electrical Drawings shall be supplied along with the power plant.
- 9.2 The manual shall include complete system details such as array lay out, schematic of the system, inverter details, working principle etc.
- 9.3 The Manual should also include all the Dos & Don'ts of Power Plant along with Graphical Representation with indication of proper methodology for cleaning, Operation and Maintenance etc.
- 9.4 Step by step maintenance and troubleshooting procedures shall also be given in the manuals.
- 9.5 Vendors should also educate the consumers during their AMC period.

10 Miscellaneous:

- 10.1 Connectivity: The maximum capacity for interconnection with the grid at a specific voltage level shall be as specified in the SERC regulation for Grid connectivity and norms of DISCOM and amended from time to time.
- 10.2 Safety measures: Electrical safety of the installation(s) including connectivity with the grid must be taken into account and all the safety rules & regulations applicable as per Electricity Act, 2003 and CEA Safety Regulation 2010 etc. must be followed.
- 10.3 Shadow analysis: The shadow analysis report with the instrument such as Solar Pathfinder or professional shadow analysis software of each site should be provided and the consumer should be educated to install the system only in shadow free space. Lower performance of the system due to shadow effect shall be liable for penalty for lower performance.
- 10.4 Firefighting system - Portable fire extinguishers/sand buckets shall be provided wherever required as per norms.

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

| Solar PV Modules/Panels | |
|--|--|
| IEC 61215 and IS 14286 | Design Qualification and Type Approval for Crystalline Silicon Terrestrial Photovoltaic (PV) Modules |
| IEC 61701:2011 | Salt Mist Corrosion Testing of Photovoltaic (PV) Modules |
| IEC 61853- 1:2011 / IS 16170-1:2014 | Photovoltaic (PV) module performance testing and energy rating –: Irradiance and temperature performance measurements, and power Rating. |
| IEC 62716 | Photovoltaic (PV) Modules – Ammonia (NH3) Corrosion Testing (as per the site condition like dairies, toilets etc) |
| IEC 61730-1,2 | Photovoltaic (PV) Module Safety Qualification – Part 1: Requirementsfor Construction, Part 2: Requirements for Testing |
| IEC 62804 | Photovoltaic (PV) modules – Test method for detection of potential-induced degradation. IEC 62804-1: Part 1: Crystalline Silicon |

| Solar PV Inverters | |
|---|---|
| IEC 62109 or IS : 16221 | Safety of power converters for use in photovoltaic power systems – Part 1: General requirements, and Safety of power converters for use in photovoltaic power systems Part 2: Particular requirements for inverters. Safety compliance (Protection degree IP 65 or better for outdoor mounting, IP 54 or better for indoor mounting) |
| IS/IEC 61683 latest (as applicable) | Photovoltaic Systems – Power conditioners: Procedure for Measuring Efficiency (10%, 25%, 50%, 75% & 90-100% Loading Conditions) |
| IEC 60068-2 /IEC 62093 (as applicable) | Environmental Testing of PV System – Power Conditioners and Inverters |
| IEC 62116:2014/ IS16169 | Utility-interconnected photovoltaic inverters - Test procedure of islanding prevention measures |
| Fuses | |
| IS/IEC 60947 (Part 1, 2 & 3), EN 50521 | General safety requirements for connectors, switches, circuit breakers (AC/DC): 1) Low-voltage Switchgear and Control-gear, Part 1: General rules 2) Low-Voltage Switchgear and Control-gear, Part 2: Circuit Breakers 3) Low-voltage switchgear and Control-gear, Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units 4) EN 50521: Connectors for photovoltaic system-Safety requirements and tests |
| IEC 60269-6:2010 | Low-voltage fuses - Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems |
| Solar PV Roof Mounting Structure | |
| IS 2062/IS 4759/AA6063 T6 | Material for the structure mounting |
| Surge Arrestors | |
| BFC 17-102:2011/ NFC 102:2011/ IEC 62305 | Lightening Protection Standard |
| IEC 60364-5-53/ IS 15086-5 (SPD) IEC 61643- 11:2011 | Electrical installations of buildings - Part 5-53: Selection and erection of electrical equipment - Isolation, switching and control Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods |
| Cables | |
| IEC 60227/IS 694, IEC 60502/IS 1554 (Part 1 & 2)/ IEC69947 (as applicable) | General test and measuring method for PVC (Polyvinyl chloride) insulated cables (for working voltages up to and including 1100 V, 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/IEC 60634 Series (Chemical earthing) (as applicable) | <p>IEC 62561-1: Lightning protection system components (LPSC) - Part: Requirements for connection components</p> <p>IEC 62561-2: Lightning protection system components (LPSC) – Part 2: Requirements for conductors and earth electrodes</p> <p>IEC 62561-7: Lightning protection system components (LPSC) - Part 7: Requirements for earthing enhancing compounds</p> |
| Junction Boxes | |
| IEC 60529 | Junction boxes and solar panel terminal boxes shall be of the thermo-plastic type with IP 65 or better protection for outdoor use, and IP 54 or better protection for indoor use |

SECTION – IV

FORMATS FOR PRICE BID

PRICE BID

(To be submitted online separately)

Performa for submission of rates of different capacity of roof top Solar Power Projects under RFP No. _____ by TPCODL.

Name of Bidder: - _____

| TP CENTRAL ODISHA DISTRIBUTION LIMITED | | | | | | | |
|--|--|-------------------|--------|--------|---------------------|-----------------------|------------------------|
| S. No. | Description | Proposed Capacity | | | | | |
| | | Part-A | Part-B | Part-C | Part-D | Part-E | Part-F |
| | | 1 KW | 2 KW | 3 KW | Above 3 KW to 10 KW | Above 10 KW to 100 KW | Above 100 KW to 500 KW |
| 1 | Quoted Capacity (kW) | | | | | | |
| 2 | Unit Rate per kWp in (INR) | | | | | | |
| 3 | GST in INR | | | | | | |
| 4 | Total all-inclusive Unit Rate per kWp in (INR) | | | | | | |

| TP SOUTHERN ODISHA DISTRIBUTION LIMITED | | | | | | | |
|---|--|-------------------|--------|--------|---------------------|-----------------------|------------------------|
| S. No. | Description | Proposed Capacity | | | | | |
| | | Part-A | Part-B | Part-C | Part-D | Part-E | Part-F |
| | | 1 KW | 2 KW | 3 KW | Above 3 KW to 10 KW | Above 10 KW to 100 KW | Above 100 KW to 500 KW |
| 1 | Quoted Capacity (kW) | | | | | | |
| 2 | Unit Rate per kWp in (INR) | | | | | | |
| 3 | GST in INR | | | | | | |
| 4 | Total all-inclusive Unit Rate per kWp in (INR) | | | | | | |

| TP NORTHERN ODISHA DISTRIBUTION LIMITED | | | | | | | |
|--|--|-------------------|--------|--------|---------------------|-----------------------|------------------------|
| S. No. | Description | Proposed Capacity | | | | | |
| | | Part-A | Part-B | Part-C | Part-D | Part-E | Part-F |
| | | 1 KW | 2 KW | 3 KW | Above 3 KW to 10 KW | Above 10 KW to 100 KW | Above 100 KW to 500 KW |
| 1 | Quoted Capacity (kW) | | | | | | |
| 2 | Unit Rate per kWp in (INR) | | | | | | |
| 3 | GST in INR | | | | | | |
| 4 | Total all-inclusive Unit Rate per kWp in (INR) | | | | | | |

| TP WESTERN ODISHA DISTRIBUTION LIMITED | | | | | | | |
|---|--|-------------------|--------|--------|---------------------|-----------------------|------------------------|
| S. No. | Description | Proposed Capacity | | | | | |
| | | Part-A | Part-B | Part-C | Part-D | Part-E | Part-F |
| | | 1 KW | 2 KW | 3 KW | Above 3 KW to 10 KW | Above 10 KW to 100 KW | Above 100 KW to 500 KW |
| 1 | Quoted Capacity (kW) | | | | | | |
| 2 | Unit Rate per kWp in (INR) | | | | | | |
| 3 | GST in INR | | | | | | |
| 4 | Total all-inclusive Unit Rate per kWp in (INR) | | | | | | |

SECTION – V

FORMATS FOR SUBMITTING RFP

Covering Letter

(The covering letter should be on the Letter Head of the Bidding Company)

Ref.No. _____

Date:

From: _____ (Insert name and address of Bidding Company)

Tel.#: _____

E-mail address# _____

To,

Chief (Procurement & Stores)
TP Central Odisha Distribution Limited
2nd Floor, IDCO Towers, Janpath, Bhubaneswar-751022

Sub: RFP for the empanelment of vendors for “Design, supply, erection, testing and commissioning including warranty, Comprehensive operation & maintenance of grid connected rooftop solar power plant of various capacities in the State of Odisha for Part-A/ Part-B/ Part C/ Part- D/Part- E/Part-F).

Dear Sir,

1. We, the undersigned....[*insert name of the 'Bidder'*] having read, examined and understood in detail the RFP Document for Implementation of Grid connected Roof Top Solar System hereby submit our Bid comprising of Price Bid and Techno Commercial Bid. We confirm that neither we nor any of our Parent Company / Affiliate/Ultimate Parent Company has submitted Bid other than this Bid directly or indirectly in response to the aforesaid RFP.
2. We give our unconditional acceptance to the RFP, dated.....and RFP Documents attached thereto, issued by TPCODL, as amended. As a token of our acceptance to the RFP documents, the same have been initiated by us and enclosed with the bid. We shall ensure that we execute such RFP as per the provisions of the RFP and provisions of such RFP Documents shall be binding on us.

Bid Capacity: We have bid for the capacity of kWp for Part-A/ Part-B/ Part C/ Part- D/Part- E/Part-F separately as per RFP terms and conditions.

3. We have submitted our Price Bid strictly as per Section IV of this RFP, without any deviations, conditions and without mentioning any assumptions or notes for the Price Bid in the said format(s).
4. In case we are a Empanelled Vendor, we shall furnish a declaration at the time of commissioning of the project to the affect that neither we have availed nor we shall avail in future any CFA other than received from TPCODL for implementation of the project.

5. Acceptance:

We hereby unconditionally and irrevocably agree and accept that the decision made by TPCODL 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 regards to execution of projects of capacity offered by us.

6. 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 Documents, in the event of our selection as successful bidder. We further undertake and agree that all such factors as mentioned in RFP have been fully examined and considered while submitting the Bid.

7. Contact Person

Details of the contact person are furnished as under:

Name :
Address :
Phone Nos. :
Fax No. :
E-Mail :

8. We are enclosing herewith the Envelope-I (Covering letter, Processing fee and Bid Security Declaration etc as per **clause No. 10.2 of Section-I** of the RFP) (through E-mail) and Techno-Commercial documents (through online) and Price Bids (through online) containing duly signed formats, each one duly sealed separately, in one original as desired by you in the RFP for your consideration as per **clause No. 10.3 of Section-I** of the RFP.

It is confirmed that our Bid is consistent with all the requirements of submission as stated in the RFP and subsequent communications from TPCODL. 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 6 month from the Bid deadline. We confirm that we have not taken any deviation to be deemed non-responsive.

Dated the day of , 2022

Yours faithfully,

Signature:

Name:

Designation with Seal

Name, Designation and Signature of Authorized Person in whose name Power of Attorney/Board Resolution/Declaration (Annexure G).

General Particulars of the bidder

| S. No. | Particulars | Details |
|--------|---|---------|
| 1. | Name of the Company | |
| 2. | Registered Office Address | |
| 3. | E-mail ID | |
| 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 document information attached by the Bidder other than specified in the RFP. | |
| 9. | Details of the Ownership structure (Details of persons owning 10% or more of the Total Paid up equity of the Bidding Company in the Format as below | Yes/No |
| 10. | Whether company is MSME as on the bidding date | Yes/No |
| 11. | Whether the Company has valid GST Registration Number (Enclose a Copy) | |
| 12. | PAN number (enclosed a copy) | |
| 13. | Bank Account Details | |

Please strike-off whichever is not applicable.

Signature:

Name:

Designation with Seal:

**BID SECURITY DECLARATION
(On the letterhead of tenderer)
Format: Bid Security Declaration Form**

Tender No:

Date:

To
Chief (Procurement & Stores)
TP Central Odisha Distribution Limited
2nd Floor, IDCO Towers, Janpath, Bhubaneswar-751022

I/We. The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration. I/We accept that I/We may be disqualified from bidding for any contract with you for a period of two years from the date of notification if I am/ We are in a breach of any obligation under the bid conditions, because I/We

- a) Have withdrawn/ modified/ amended, impairs or derogates from the tender, my/ our Bid during the period of bid validity specified in the form of Bid; or
- b) Having been notified of the acceptance of our Bid by the Authority during the period of bid validity
 - i. fail or reuse to execute the contract, if required, or
 - ii. fail or refuse to furnish the Performance Security, in accordance with the Instruction to Bidders/ Tender Document/ RFP document

I/We understand this Bid Securing Declaration shall cease to be valid if I am/ We are not the successful Bidder, upon the earlier of

- i. the receipt of your notification of the name of the successful Bidder, or
- ii. thirty days after the expiration of validity of my/ our Bid.

Signed (Signature of person whose name and capacity are shown)

In the capacity of (legal capacity of person signing the Bid Securing Declaration)

Name (complete name of person signing the Bid Securing Declaration)

Duly authorized to sign the bid for and on behalf of (complete name of Bidder)

Date on Day of (date of signing)

Corporate Seal (wherever appropriate)

(Signature of the Authorised Signatory)

FORMAT FOR PERFORMANCE BANK GUARANTEE (PBG)**PROFORMA FOR PERFORMANCE BANK GUARANTEE (CP cum EP)
(On Rs.100/- Stamp Paper)****Note:**

- (a) Format shall be followed in toto
 (b) Claim period of one month must be kept up
 (c) The guarantee to be accompanied by the covering letter from the bank confirming the signature to the guarantee

TP Central Odisha Distribution Limited**Bhubaneswar CP cum EP BG No.....****Order/Contract No.....dated.....**

1. You have entered into a Contract No _____ with M/s. _____ (hereinafter referred to as "the Vendor") for the supply cum erection / civil work of _____ (hereinafter referred to as "the said Equipment") for the price and on the terms and conditions contained in the said contract.

2. In accordance with the terms of the said contract, "the Vendor" agreed to furnish you with an irrevocable, unconditional and acceptable bank guarantee for 10% of the value of contract and to be valid till the end of Guarantee period plus one month towards "Contract cum Equipment performance". For this purpose, you have agreed to accept the guarantee.

3. In consideration thereof, we, _____ hereby irrevocably and unconditionally guarantee to pay to you on demand but in any case before the end of five working days from the date of the claim and without demur and without reference to "the Vendor" such amount or amounts not exceeding the sum of Rs. _____ (Rupees _____ only) being _____% (_____ percent) of the total value of the contract on receipt of your intimating that "the Vendor" has not fulfilled his contractual obligations. You shall be the sole judge for such non-fulfilment and "the Vendor" shall have no right to question such judgment.

4. You shall have the right to file / make your claim on us under the guarantee for a **further period of one month** from the date of expiry.

5. This guarantee shall not be revoked without express consent and shall not be affected by your granting time or any other indulgence to "the Vendor", which shall include but not be limited to, postponement from time to time of the exercise the same in you or any right which you may have against "the Vendor" and to exercise the same in any covenant contained or implied in the said contract or any other course or remedy or security available to you, and our Bank shall not be released from its obligations under this guarantee by your exercising any of your rights with reference to matters aforesaid or any of them or by reasons of any other act or forbearance or other acts of omission or commission on your part or any other indulgence shown by you or by any other matter or thing whatsoever which under the law would, but for this provision have the effect of relieving our bank from its obligation under this guarantee.

6. We also agree that you shall be entitled at your option to enforce this guarantee against our bank as a principal debtor, in the first instance, notwithstanding any other security or guarantee that you may have in relation to "the Vendor's" liabilities in respect of the premises

7. This guarantee shall not be affected by any change in the constitution of our Bank or “the Vendor” or for any other reason whatsoever.

8. Any claim / extension under the guarantee can be lodge-able at outstation banks or at Bhubaneswar branch and claim will also be payable at Bhubaneswar Branch (to be confirmed by Bhubaneswar Branch by a letter to that effect in case BG is from the branch outside Bhubaneswar)

9. Notwithstanding anything herein contained, our liability under this guarantee is limited to Rs. _____ (Rupees _____) only and the guarantee will remain in force upto and including _____ (Date) and shall be extended from time to time for such period or period as may be desired by “the Vendor”.

10. Unless a demand or claim under this guarantee is received by us in writing within one months from _____ (expiry date) i.e. on or before _____ (claim period end date), we shall be discharged from all liabilities under this guarantee thereafter.

Dated at _____ this _____ day of _____ 200__

Witness

Bank’s rubber stamp

1. _____

Designation of Signatory

2. _____

1.

Banks full address

Bank official number

CHECK LIST FOR BANK GUARANTEES

| Sl. No. | Details of checks | YES/NO. |
|---------|---|---------|
| a) | Is the PBG on non-judicial Stamp paper of appropriate value, as per applicable Stamp Act of the place of execution | |
| b) | 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 BG and the stamp paper should be purchased either in the name of the executing Bank or the party on whose behalf the BG has been issued. Also, the Stamp Paper should not be older than six months from the date of execution of BG). | |
| c) | Has the executing Officer of BG indicated his name, designation and Power of Attorney No. /Signing Power no. on the BG? | |
| d) | Is each page of BG duly signed / initiated by executants 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? | |
| e) | Does the Bank Guarantees compare verbatim with the Performa prescribed in the Bid Documents? | |
| f) | Are the factual details such as Bid Document No. / Specification No., / LoA No. (if applicable) / Amount of BG and Validity of BG/correctly mentioned in the BG | |
| g) | Whether overwriting/cutting if any on the BG have been properly authenticated under signature & seal of executants? | |
| h) | Contact details of issuing bank including email id, mobile number etc. | |

FINANCIAL ELIGIBILITY CRITERIA REQUIREMENT
(AS PER CLAUSE 9 of Section-I)
(To be submitted on the letterhead of Bidding Company)

To,

[Name and Address of State Implementing Agency]

Sub: Bid for Implementation of Grid connected Roof Top Solar System scheme in response to the RFP No:

.....

Dear Sir,

We submit our Bid/Bids for the total capacity of kWp in Part-A/ Part-B/ Part C/ Part- D put together for which details of our Financial Eligibility Criteria Requirements are as follows.

We certify that the Financially Evaluated Entity(ies) had an Annual Turnover as follows:

The Annual turnover of [Insert the amount] per kW of the capacity offered in its Bid in any one of the last 3 financial years preceding the bid deadline subjected to the condition that the bidder should at least have completed one financial year.

OR

Net worth (strike out whichever is not applicable) of Rs.....Crore computed as per instructions provided in **Clause 5.5.2** of this RFP based on unconsolidated audited annual accounts (refer Note-1 below) any of the last 3 Years immediately preceding the Bid Deadline.

| Name of Financially Evaluated Entity* | Relationship with Bidding Company** | Financial year | Year of Incorporation | Annual Turnover (Rs. Crore) | Net worth as per Clause 5.5.2 (in Rs. Crore) |
|---------------------------------------|-------------------------------------|----------------|-----------------------|-----------------------------|---|
| | | | | | |

* The Financially Evaluated Entity may be the Bidding Company itself.

** The column for "Relationship with Bidding Company" is to be filled in only in case financial capability of Parent Company and/or Affiliate has been used for meeting Qualification Requirements.

Yours faithfully

(Signature and stamp (on each page) of Authorized Signatory of Bidding Company.

Name:

Date:

Place:

(Signature and stamp (on each page) of Chartered Accountant/Statutory Auditors of Bidding Company.

Name:

Date:

Place:

Notes:

- i. 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 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 for certificate of relationship of Parent Company or Affiliate with the Bidding Company.

To,

.....

Sub: Bid for Implementation of Grid connected Roof Top Solar System.

Dear Sir,

We hereby certify that M/s.....,M/s.....,M/s.....are the Affiliate(s) /Parent Company of the Bidding Company as per the definition of Affiliate/Parent Company 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/Parent Company/Bidding Company or vice versa as on seven (7) days prior to the Bid Deadline are given as below:

| Name of Bidding Company | Name of the Affiliate of the Bidding Company/ Name of the Parent Company of the Bidding Company | Name of the Company having common control on the Affiliate and the Bidding Company | Percentage of Equity Holding of Parent Company in the Bidding Company |
|-------------------------|--|--|---|
| | | | |

*Strike out whichever is not applicable.

.....

(Insert Name and Signature of Statutory Auditor or practicing Company Secretary of the Bidder)

Undertaking from the Financially Evaluated Entity or its Parent Company/ Ultimate Parent Company

(On the Letter Head of the Financially Evaluated Entity or its Parent Company/Ultimate Parent Company)

Name:

Full Address:

Telephone No.:

E-mail

address:

Fax/No.:

To,

.....

Dear Sir,

We refer to the RFP No..... dated..... for “Implementation of Grid connected Roof Top Solar Systems”.

“We have carefully read and examined in detail the RFP, including in particular, Clause of the RFP, regarding submission of an undertaking, as per the prescribed Format at Annexure..... of the RFP.

We confirm that M/s..... (Insert name of Bidding Company/) has been authorized by us to use our financial capability for meeting the Financial Eligibility as specified in Clause.... of the RFP referred to above.

We have also noted the amount of the Performance Guarantee required to be submitted as per Clause....of the RFP the(Insert the name of the Bidding Company) in the event of it being selected as the Empanelled Vendor.

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

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 Authorized Signatory

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.....

CONSORTIUM AGREEMENT

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

THIS Consortium Agreement (“Agreement”) executed on this ____ day of ____ 2021 between M/s [insert name of Lead Member] ____ a Firm / Company incorporated under the laws of ____ and having its Registered Office at ____ (hereinafter called the “Lead Member”, which expression shall include its successors, executors and permitted assigns) And M/s ____ a Firm / Company incorporated under the laws of ____ and having its Registered Office at ____ (hereinafter called the “Technical Member”, which expression shall include its successors, executors and permitted assigns), which expression shall include its successors, executors and permitted assigns) WHEREAS, each Member individually shall be referred to as the “Member” and both the Members shall be collectively referred to as the “Members” in this Agreement.

WHEREAS the [Name and Address of State Implementing Agency](hereinafter called *Insert the name of State Implementing Agency*), Company incorporated under the Company’s Act, 1956 has invited response to RFP No. *Insert the RFP Number and* dated ____ for design, manufacture, supply, erection, testing and commissioning including warranty, operation & maintenance of Roof Top Solar system in Odisha.

WHEREAS the RFP documents stipulates that the Lead Member may enter into a Technical Consortium Agreement with another Company / Corporate entity to fulfil the Technical Eligibility Criteria as stipulated in the RFP document. The Members of the Bidding Consortium will have to submit a legally enforceable Consortium Agreement in a format enclosed with the RFP document.

NOW THEREFORE, THIS AGREEMENT WITNESSTH AS UNDER:

In consideration of the above premises and agreements all the Members in this Consortium do hereby mutually agree as follows:

1. We, the Members of the Consortium and Members to the Agreement do hereby unequivocally agree that (M/s_____), shall act as the Lead Member as defined in the RFP for self and agent for and on behalf of Technical Member _____.
2. The Lead Member is hereby authorized by the Technical Member of the Consortium to bind the Consortium and receive instructions for and on their behalf.
3. The Lead Member shall be liable and responsible for ensuring the individual and collective commitment of each of the Members of the Consortium in discharging all of their respective obligations. Each Member further undertakes to be individually liable for the performance of its part of the obligations without in any way limiting the scope of collective liability envisaged in this Agreement.
4. Subject to the terms of this Agreement, the Technical member shall be responsible for providing technical knowledge for Implementation of Grid connected Roof Top Solar Systems.
5. In case of any breach of any commitment by any of the Consortium Members, the Lead Member shall be liable for the consequences thereof.

6. This Agreement shall be construed and interpreted in accordance with the Laws of India and courts at Odisha alone shall have the exclusive jurisdiction in all matters relating thereto and arising there under.
7. It is hereby further agreed that in case of being shortlisted, the Members do hereby agree that they shall abide by the terms & conditions of the RFP document.
8. It is further expressly agreed that this Agreement shall be irrevocable and shall form an integral part of the RFP submitted to *Insert the name of State Implementing Agency* and shall remain valid till completion of the job assigned to the Contractor.
9. The Lead Member is authorized and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Members respectively from time to time in the response to RFP.
10. It is hereby expressly understood between the Members that no Member at any given point of time, may assign or delegate its rights, duties or obligations under this agreement without the explicit permission of *Insert the name of State Implementing Agency*.
11. This Agreement:
 - a) Has been duly executed and delivered on behalf of each Member hereto and constitutes the legal, valid, binding and enforceable obligation of each such Member;
 - b) Sets forth the entire understanding of the Members hereto with respect to the subject matter hereof; and
 - c) May not be amended or modified except in writing signed by each of the Members and with prior written consent of *Insert the name of State Implementing Agency*.

IN WITNESS WHEREOF, the Members have, through their authorized representatives, executed these presents on the Day, Month and Year first mentioned above.

For M/s----- [Lead Member] -----

(Signature, Name & Designation of the person authorized vide Board Resolution Dated)

Witnesses:

1) Signature----- 2) Signature -----

Name:

Name:

Address:

Address:

For M/s----- [Technical Member]

(Signature, Name & Designation of the person authorized vide Board Resolution)

Dated

Witnesses:

1) Signature----- 2) Signature -----

Name:

Name:

Address:

Address:

(Shareholding Certificate)

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

(Signature of Authorized Signatory) With Stamp

(Signature of Company Secretary/Director/Chartered Accountant)

Section – VI

Annexure

(A to X)

DOCUMENTS REQUIRED FOR PROJECT SANCTION

Following documents will be required to be submitted for project sanction:

Check List**For issuance of Sanction Order**

| S. No. | Documents | Yes / NO | Page No. |
|---------------|--|-----------------|-----------------|
| 1. | Sanction Request letter on Letter head (Annexure D) | | |
| 2. | Copy of CAPEX Agreement | | |
| 3. | NOC/ Acknowledgement from DISCOM | | |
| 4. | Copy of Electricity Bill | | |
| 5. | Coloured Site Photos with Date & Time stamping | | |
| 6. | BOM & SLD | | |
| 7. | Solar PV Module Specs Sheet | | |
| 8. | Solar PV Module IEC Certificates | | |
| 9. | Inverter Specs Sheet | | |
| 10. | Inverter IEC Certificates | | |

Signature

Operation and Maintenance Guidelines of Grid Connected PV Plants for Part A & B, C, D, E & F

1. For the optimal operation of a PV plant, maintenance must be carried out on a regular basis.
2. All the components should be kept clean. It should be ensured that all the components are fastened well at their due place.
3. Maintenance guidelines for various components viz. solar panels, inverter, wiring etc. are discussed below:

SOLAR PANELS

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

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

CABLES AND CONNECTION BOXES

- i. Check the connections for corrosion and tightness.
- ii. Check the connection box to make sure that the wires are tight, and the water seals are not damaged.
- iii. There should be no vermin inside the box.
- iv. Check the cable insulating sheath for cracks, breaks or burns. If the insulation is damaged, replace the wire
- v. If the wire is outside the building, use wire with weather-resistant insulation.
- vi. Make sure that the wire is clamped properly and that it should not rub against any sharp edges or corners.
- vii. If some wire needs to be changed, make sure it is of proper rating and type.

INVERTER

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

SHUTTING DOWN THE SYSTEM

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

INSPECTION AND MAINTENANCE SCHEDULE:

| Component | Activity | Description | Interval | By |
|-----------|-----------------------------------|---|---|-------------|
| PV Module | Cleaning | Clean any bird droppings/ dark spots on module | Immediately | Beneficiary |
| | Cleaning | Clean PV modules with plain water or mild dishwashing detergent. Do not use brushes, any types of solvents, abrasives, or harsh detergents. | Fortnightly or as per the site conditions | Beneficiary |
| | Inspection (for plants > 100 kWp) | Use infrared camera to inspect for hot spots; bypass diode failure | Annual | Technician |

| Component | Activity | Description | Interval | By |
|----------------|----------------|---|-----------|-----------------|
| PV Array | Inspection | Check the PV modules and rack for any damage. Note down location and serial number of damaged modules. | Annual | User/Technician |
| | Inspection | Determine if any new objects, such as vegetation growth, are causing shading of the, array and move them if possible. | Annual | User/Technician |
| | Vermin Removal | Remove bird nests or Vermin from array and rack area. | Annual | User/Technician |
| Junction Boxes | Inspection | Inspect electrical boxes for corrosion or intrusion of water or insects. Seal boxes if required. Check position of switches and breakers. Check operation of all protection devices. | Annual | Electrician |
| Wiring | Inspection | Inspect cabling for signs of cracks, defects, loose connections, overheating, arcing, short or open circuits, and ground faults. | Annual | Electrician |
| Inverter | Inspection | Observe | Quarterly | Electrician |
| Component | Activity | Description | Interval | By |
| | | Instantaneous operational indicators on the faceplate of the inverter to ensure that the amount of power being generated is typical of the conditions. Inspect Inverter housing or shelter for physical maintenance, if required. | | |
| Inverter | Service | Clean or replace any air filters. | As needed | Electrician |
| | | Spot-check monitoring instruments pyranometer | | |

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

| | | | | |
|--------------|---------------|--|----------------|----------------|
| (if present) | Service | Lubricate tracker-mounting bearings, gearbox as required. | Bi-annual | Technician |
| Plant | Monitoring | Daily Operation and Performance Monitoring | Daily | Beneficiary |
| Spare Parts | Management | Manage inventory of spare parts. | As needed | Site in charge |
| Logbook | Documentation | Document all O&M activities in a workbook available to all service personnel | Continuou s | Site in charge |

Operation and Maintenance Guidelines of Grid Connected PV Plants

- i. Periodic cleaning of solar modules, preferably once every fortnight. As this task has to be done by the beneficiary, the vendors shall apprise the beneficiary on the importance and proper technique for cleaning.
- ii. O&M of Solar Power Plant shall be compliant with grid requirements to achieve committed energy generation.
- iii. Periodic checks of the Modules, PCUs and BoS shall be carried out as a part of routine preventive and breakdown maintenance.
- iv. Immediate replacement of defective Modules, Invertors/PCUs and other equipment as and when required.
- v. Supply of all spares, consumables and fixtures as required. Such stock shall be maintained for all associated equipment and materials as per manufacturer/ supplier's recommendations.
- vi. All the equipment testing instrument required for Testing, Commissioning and O&M for the healthy operation of the Plant shall be maintained by the Bidder. The testing equipment must be calibrated once every 2 years from NABL accredited labs and the certificate of calibration must be kept for reference as required.
- vii. If negligence/ mal operation on part of the Bidder's operator results in failure of equipment, such equipment should be repaired/ replaced by the Bidder free of cost.
- viii. If any jobs covered in O&M Scope as per RFP are not carried out by the contractor/ Bidders during the O&M period, the Engineer-In-Charge shall take appropriate action as deemed fit.
- ix. *Insert the name of State Implementing Agency* reserves the right to make surprise checks/ inspection visits at its own or through authorized representative to verify the O&M activities being carried out by the Bidder. Failure to adhere to above guidelines will result in penal action including debarring from participation in next tender

Sanction Request Letter*(On Letterhead of the Vendor)*

Letter No. XX/XXX/2019-20/XXX

Dated XX.XX.XXXX

To,*[Insert the name of Implementing Agency**Address***Sub: Application for approval of project sanction for disbursement of CFA for Installation and Commissioning of Solar PV Plant under XXXX Model in Part X**

Ref: 1. Your Allocation Letter XXXX/XXX/XXX dated XX.XX.XXXX

2. Project Sanction documents received vide letter number XXX dated XX.XX.XXXX

Dear Sir,

In reference to the above allocation letter dated XX.XX.XXXX, allocating us an aggregate capacity of XX kWp (allocated capacity in the category) Solar PV Project under XXXX model under Part X, we request you to kindly issue this consent letter for installation and commissioning of solar PV projects in *[Insert the name of Implementing Agency]* area under the grid connected rooftop scheme as per the following details:

| Total allocated capacity | Project Cost (Rs/ kWp) | Capacity Sanctioned (kWp) | CFA Amount |
|--------------------------|------------------------|---------------------------|------------|
| 1. | | | |
| 2. | | | |
| 3. | | | |

We shall complete the Installation & Commissioning of the sanctioned projects as per the terms and conditions of the RFP document and work order issued by the *[Insert the name of Implementing Agency]*.

Please find the check list of documents attached for sanction of projects

| S.No | Documents | Yes/ No | Page No. |
|------|--|---------|----------|
| 1. | Covering letter on Letterhead | | |
| 2. | Copy of CAPEX Agreement/ RESCO Agreement (PPA) | | |

| | | | |
|-----|--|--|--|
| 3. | NOC/ Acknowledgement from DISCOM | | |
| 4. | Copy of Electricity Bill | | |
| 5. | Coloured Site Photos with Date & Time Stamping and Geo-coordinates | | |
| 6. | BOM & SLD | | |
| 7. | Solar PV Module Specs Sheet | | |
| 8. | Solar PV Module IEC Certificates | | |
| 9. | Inverter Specs Sheet | | |
| 10. | Inverter IEC Certificates | | |
| 11. | DCR Undertaking (individually for each project) | | |

Thanking You

Yours faithfully,
 (Name of Authorized signatory of the Vendor)
 (Designation)

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

Quality certification and standards for grid-connected rooftop solar PV systems are essential for the successful mass-scale implementation of this technology. It is also imperative to put in place an efficient and rigorous monitoring mechanism, adherence to these standards. Hence, all components of grid-connected rooftop solar PV system/ plant must conform to the relevant standards and certifications given below:

| Solar PV Modules/Panels | |
|-------------------------------------|--|
| IEC 61215/ IS 14286 | Design Qualification and Type Approval for Crystalline Silicon Terrestrial Photovoltaic (PV) Modules |
| IEC 61701 | Salt Mist Corrosion Testing of Photovoltaic (PV) Modules |
| IEC 61853- Part 1/ IS 16170: Part 1 | Photovoltaic (PV) module performance testing and energy rating: Irradiance and temperature performance measurements, and power rating |
| IEC 62716 | Photovoltaic (PV) Modules – Ammonia (NH ₃) Corrosion Testing (As per the site condition like dairies, toilets) |
| IEC 61730-1,2 | Photovoltaic (PV) Module Safety Qualification – Part 1: Requirements for Construction, Part 2: Requirements for Testing |
| IEC 62804 | Photovoltaic (PV) modules - Test methods for the detection of potential-induced degradation. IEC TS 62804-1: Part 1: Crystalline silicon (mandatory for applications where the system voltage is > 600 VDC and advisory for installations where the system voltage is < 600 VDC) |
| IEC 62759-1 | Photovoltaic (PV) modules – Transportation testing, Part 1: Transportation and shipping of module package units |
| Solar PV Inverters | |
| IEC 62109-1, IEC 62109-2 | Safety of power converters for use in photovoltaic power systems – Part 1: General requirements, and Safety of power converters for use in photovoltaic power systems Part 2: Particular requirements for inverters. Safety compliance (Protection degree IP 65 for outdoor mounting, IP 54 for indoor mounting) |
| IEC/IS 61683 (as applicable) | Photovoltaic Systems – Power conditioners: Procedure for Measuring Efficiency (10%, 25%, 50%, 75% & 90-100% Loading Conditions) |

| | |
|--|---|
| <p>BS EN 50530 (as applicable)</p> | <p>Overall efficiency of grid-connected photovoltaic inverters: This European Standard provides a procedure for the measurement of the accuracy of the maximum power point tracking (MPPT) of inverters, which are used in grid- connected photovoltaic systems. In that case the inverter energizes a low voltage grid of stable AC voltage and constant frequency. Both the static and dynamic MPPT efficiency is considered.</p> |
| <p>IEC 62116/ UL 1741/ IEEE 1547 (as applicable)</p> | <p>Utility-interconnected Photovoltaic Inverters - Test Procedure of Islanding Prevention Measures</p> |
| <p>IEC 60255-27</p> | <p>Measuring relays and protection equipment – Part 27: Product safety requirements</p> |
| <p>IEC 60068-2 (1, 2, 14, 27, 30 & 64)</p> | <p>Environmental Testing of PV System – Power Conditioners and Inverters a) IEC 60068-2-1: Environmental testing - Part 2-1: Tests - Test A: Cold b) IEC 60068-2-2: Environmental testing - Part 2-2: Tests - Test B: Dry heat c) IEC 60068-2-14: Environmental testing - Part 2-14: Tests - Test N: Change of temperature d) IEC 60068-2-27: Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock e) IEC 60068-2-30: Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle) f) IEC 60068-2-64: Environmental testing - Part 2-64: Tests - Test Fh: Vibration, broadband random and guidance</p> |
| <p>IEC 61000 – 2,3,5 (as applicable)</p> | <p>Electromagnetic Interference (EMI) and Electromagnetic Compatibility (EMC) testing of PV Inverters</p> |
| <p>Fuse</p> | |
| <p>IS/IEC 60947 (Part 1, 2 & 3), EN 50521</p> | <p>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</p> |
| <p>IEC 60269-6</p> | <p>Low-voltage fuses - Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems</p> |
| <p>Surge Arrestors</p> | |

| | |
|--|--|
| IEC 62305-4 | Lightening Protection Standard |
| IEC 60364-5-53/ IS 15086-5 (SPD) | Electrical installations of buildings - Part 5-53: Selection and erection of electrical equipment - Isolation, switching and control |
| IEC 61643- 11:2011 | Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods |
| Cables | |
| IEC 60227/IS 694, IEC 60502/IS 1554 (Part 1 & 2)/ IEC69947 | General test and measuring method for PVC (Polyvinyl chloride) insulated cables (for working voltages up to and including 1100 V, and UV resistant for outdoor installation) |
| BS EN 50618 | Electric cables for photovoltaic systems (BT(DE/NOT)258), mainly for DC Cables |
| Earthing /Lightning | |
| IEC 62561 Series (Chemical earthing) | IEC 62561-1: Lightning protection system components (LPSC) - Part 1: Requirements for connection components IEC 62561-2: Lightning protection system components (LPSC) - Part 2: Requirements for conductors and earth electrodes IEC 62561-7: Lightning protection system components (LPSC) - Part 7: Requirements for earthing enhancing compounds |
| Junction Boxes | |
| IEC 60529 | Junction boxes and solar panel terminal boxes shall be of the thermo-plastic type with IP 65 protection for outdoor use, and IP 54 protection for indoor use |
| Energy Meter | |
| IS 16444 or as specified by the DISCOMs | A.C. Static direct connected watt-hour Smart Meter Class 1 and 2 — Specification (with Import & Export/Net energy measurements) |
| Solar PV Roof Mounting Structure | |
| IS 2062/IS 4759 | Material for the structure mounting |

Note: Equivalent standards may be used for different system components of the plants. In case of clarification following person/agencies may be contacted.

- i. Ministry of New and Renewable Energy (Govt. of India)
- ii. National Institute of Solar Energy
- iii. The Energy & Resources Institute
- iv. TUV

PROJECT REPORT FORMAT**Format for Summary Project Report for
Grid Connected Rooftop Solar Plants**

1. Name of Bidder:
2. RFP no.
3. Project details (Site location & Address):
4. Brief about the Rooftop Solar Power Generation System:
5. Details of the beneficiary:
6. Specifications of the Components and Bill of Material/ Quantities:

| S. No. | Component | Specifications | Quantity | Make |
|--------|---------------------------------------|----------------|----------|------|
| A | Solar PV module | | | |
| A.1 | Aggregate Solar PV capacity (kWp) | | | |
| B | Grid Tie inverter (Type and Capacity) | | | |
| B.1 | Aggregate Inverter capacity (kVA) | | | |
| C | Module mounting structure | | | |
| D | Array Junction Box | | | |
| E | AC Distribution Board | | | |
| F | Cable (All type) | | | |
| G | Earthing Kit (maintenance free) | | | |
| H | Meters | | | |
| I | Online monitoring system | | | |
| J | Any other component | | | |
| K | Transformer | | | |

7. Unit cost of solar power generation:
8. Expected output/annum:
9. Respective drawings for layout, electrical wiring connections, earthing, components etc.
10. Connectivity details with grid and metering arrangement (with sketch diagram)
11. Copy of electricity bill of the beneficiary and consumer number
12. Any other information.
13. Documentary proof regarding beneficiary type as per of the RFP document.

DECLARATION of AUTHORIZATION

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

I/ We (name and address of the registered office of the Bidding Company as applicable) do hereby constitute, appoint and authorize Mr./Ms. (name & residential address) who is presently employed with us and holding the position of 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 implementation of grid connected Roof top solar projects in response to the RFP No dated issued by *Insert the name of State Implementing Agency*, 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 *Insert the name of State Implementing Agency* may require us to submit.

The aforesaid undertaking is further authorized for making representations to the *Insert the name of State Implementing Agency* and providing information / responses to Odisha representing us in all matters before *Insert the name of State Implementing Agency* and generally dealing with *Insert the name of State Implementing Agency* in all matters in connection with Bid till the completion of the bidding process as per the terms of the above mentioned RFP.

We hereby agree to ratify all acts, deeds and things done by our said undertaking pursuant to this undertaking and that all acts, deeds and things done by our aforesaid undertaking 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 (Insert the name of the executants' company) Name:
Company:**

Phone :

E-mail: Address :

Sincerely

Quarterly O&M report

Month and year:

Name of the bidder:

RFP ref no.:

Project Capacity:

Address of the site:

Part A

| Component | Activity | Description | Date | Name / Signature | *Remarks |
|------------------|--------------------------------------|--|-------------|-----------------------------|-----------------|
| PV Module | Cleaning | Immediately clean any bird droppings/dark spots on module. | | | |
| | Cleaning | Clean PV modules with plain water or mild dishwashing detergent. | | | |
| | Inspection (for plants > 100 kWp) | Infrared camera inspection for hot spots; bypass diode failure. | | | |
| PV Array | Inspection | Check the PV modules and rack for any damage. | | | |
| | Inspection | If any new, objects, such as vegetation growth etc., are causing shading of the array. Remove if any. | | | |
| | Vermin Removal | Remove bird nests or vermin from array and rack area. | | | |
| Junction Boxes | Inspection | Inspect electrical boxes for corrosion, intrusion of water or vermin. Check position of switches and breakers. Check status of all protection devices. | | | |

| | | | | | |
|------------------|---------------|--|--|--|--|
| Wiring | Inspection | Inspect cabling for signs of cracks, defects, loose connections, corrosion, overheating, arcing, short or open circuits, and ground faults. | | | |
| Inverter | Inspection | Observe instantaneous operational indicators on the faceplate. Inspect Inverter housing or shelter for any physical maintenance. Check for connection tightness. | | | |
| Inverter | Service | Clean or replace any air filters. | | | |
| Instruments | Validation | Verify monitoring instruments (pyranometer etc.) with standard instruments to verify their operation within tolerance limits. | | | |
| Transformer | Inspection | Inspect transformer oil level, temperature gauges, breather, silica gel, meter, connections etc. | | | |
| Plant | Monitoring | Daily Operation and Performance Monitoring. | | | |
| Spare Parts | Management | Manage inventory of spare parts. | | | |
| Logbook | Documentation | Maintain daily log records. | | | |
| Tracker (if any) | Inspection | Inspect gears, gear boxes, bearings, motors. | | | |
| | Service | Lubricate bearings, gear as required. | | | |

*Provide details of any replacement of systems/components, damages, plant/inverter shut down (planned/forced), breakdown, etc under remarks.

The same may be inspected by *Insert the name of State Implementing Agency* or its authorized representative at any time 5 years of O&M period. The Register will have the information about the daily generation, Inverter downtime if any, Grid outages.

| (Tax Invoice on Company letter Head with GST No.) | | | | | | | | | |
|--|---|---------|-----|------------------|------|-----|--|----------|-----|
| Invoice No.: | | | | Place of Supply: | | | | | |
| Invoice Date: | | | | | | | | | |
| Bill To | | | | | | | | | |
| Name, contact no. and Address of the consumers | | | | | | | | | |
| SI No | Item and Description | HSN/SAC | Qty | Rate | CGST | | SGST | | Amt |
| | | | | | % | Amt | % | Amt | |
| | | | | | | | | | X |
| | *Additional cost under customization includes.... | | | | | | | | A |
| Total in Words A+ (X-Y) | | | | | | | Total amount considered for CFA | X | |
| | | | | | | | Admissible CFA @ 40% | Y | |
| Terms and Conditions *Customization cost is over and above the tender discover rate and is not eligible for CFA as per MNRE guidelines. | | | | | | | Amount billed to consumer, excluding CFA | X-Y | |
| | | | | | | | Total | A+ (X-Y) | |
| | | | | | | | Authorized Signature | | |
| Consumer Signature | | | | | | | | | |
| | | | | | | | | | |

Project Completion Report for Grid-Connected Rooftop

| | | | |
|--|--|-------------------------------|--|
| Financial year * : | | | |
| Approval No. * : | | | |
| Proposal Title : | | | |
| Installed by agency : | | | |
| | | | |
| Title of the Project* : | | SPV Capacity (kWp)*: | |
| Category of the organization/ beneficiary*: | | Name of the contact person* : | |
| Address of contact person* : | | | |
| State* : | | District/City*: | |
| Mobile* : | | Email*: | |
| Aadhaar Card Number (For Residential) Copy to be attached. | | Latitude: | |
| | | Longitude: | |
| Other info | | | |
| Electricity Distribution Company Name : | | Sanction Load | |
| Electricity consumer account no. as per electricity bill : | | | |

| Technology Description & System Design /Specification | | | |
|--|--|--------------------------------|--|
| (Compliance to BIS/ IEC Standards is mandatory – Attach Copies) | | | |
| 1. Solar PV Module: | | | |
| Power of each PV Module / Nos.(Wp)* / Make | | | |
| Cumulative Capacity of Modules(kWp): | | | |
| Solar cell technology : | | Tilt Angle of Modules: | |
| Module efficiency (in Percentage) : | | Azimuth | |
| Indigenous or imported | | RFID passed inside or outside: | |
| 2. Inverters: | | | |
| Type of inverter : | | | |
| Power of each PCU/ Nos. of inverters (kVA)* / Make | | | |

| | | | |
|---|---------------------------------------|----------------------------------|---------------------|
| Capacity/Power of PCU/inverters (kVA) : | | Type of Charge Controller / MPPT | |
| Inverter efficiency (Full load) : (in percentage) | | | |
| Grid connectivity level phase | Single Phase/ Three Phase | Grid connectivity level Voltage | 230 V/ 415 V |
| 3. Mounting Structures | | | |
| Type | | Surface Finish | |
| Material | | Wind Speed Tolerance | |
| 4. Cables: | | | |
| DC Cable Make & Size | | Length: | |
| AC Cable Make & Size (Inverter to ACDB) | | Length: | |
| AC Cable Make & Size (ACDB to Electric Panel) | | Length: | |
| Conductor | Multi strand high conductivity Copper | Insulation/sheath | PVC /XLPE Insulated |
| 5. JUNCTION BOX & DISTRIBUTION BOARDS | | | |
| Type | weatherproof, dust & vermin proof | Nos.: | |
| Make | | | |
| 6. EARTHING & LIGHTNING PROTECTION | | | |
| EQUIPMENT EARTHING | | | |
| AC (Nos.) | | Earth Resistance | |
| DC (Nos.) | | Earth Resistance | |
| LIGHTNING ARRESTORS (LA) | | | |
| Type | | | |
| LA (Nos.) | | Earth Resistance | |

(Signature of Vendor)
With Stamp

Annex: Copy of System test & Earth test reports (annexed)

Commissioning Test Report kW

Inverter Testing (DC) Side: Nos. of Inverter: Nos.

| Inverter S. No. | Capacity | String 1: Voc | String 2: Voc | Remark |
|-----------------|----------|---------------|---------------|--------|
| | | | | |
| | | | | |

Inverter Testing (AC) Side – Single / Three Phase

| Inverter S. No. | Capacity | R – Y/ P-N | Y – B | B - R | R – N | Y – N | B - N | Remark |
|-----------------|----------|---------------|-------|-------|-------|-------|-------|--------|
| | | | | | | | | |
| | | | | | | | | |

ACDB & Meter Panel Testing – Single / Three Phase

| | R – Y/ P-N | Y – B | B - R | R – N | Y – N | B - N | Remark |
|-----------------|---------------|-------|-------|-------|-------|-------|--------|
| ACDB I/C (V) | | | | | | | |
| ACDB O/G (V) | | | | | | | |
| Meter Panel I/C | | | | | | | |
| Meter Panel O/G | | | | | | | |

Earthing Pit Details: Nos. of Earth Pit: Nos.

| | Earthing AC | Earthing DC | Earthing LA | Remark |
|------------------------|-------------|-------------|-------------|--------|
| Earth Test Value (Ohm) | | | | |

Sign
Site Engineer

Check List**Documents against Completion of Project**

Name of Vendor: _____ Allocated Capacity : _____ kWp

Allocation letter No.: _____

Consent letter No. : _____

Name of Beneficiary: _____ Installed Capacity: _____ kW

| S. No. | Documents | Yes / NO | Page No. |
|--------|--|----------|----------|
| 1. | Claim letter for CFA | | |
| 2. | Solar System Warrantee Certificate for 5 / 25 years | | |
| 3. | Copy of Inspection report | | |
| 4. | Copy of PR Test report | | |
| 5. | Copy of Completion report - Annexure J | | |
| 6. | Copy of Solar System (Electrical side) testing report | | |
| 7. | Copy of Joint Completion certificate (JCR) | | |
| 8. | Solar PV module & Solar Inverter Serial No. | | |
| 9. | Solar PV module & Solar Inverter test sheet | | |
| 10. | Solar PV module & Solar Inverter warranty certificates | | |
| 11. | Solar PV plant Insurance Cover | | |
| 12. | PV Syst, Stadd Pro, Final BOM, As built drawing | | |
| 13. | Net Metering Installation report | | |

Signature

INTIMATION TO DISCOM FOR IMPLEMENTATION OF GRID CONNECTED ROOFTOP SOLAR PV PLANT**UNDER****SCHEME**

To,

Date:

_____ (Designated Officer, DISCOM)

| | | |
|---------------|---|--|
| 1. | Name of SPD/Implementing Agency | |
| 2 | Name of the Consumer * | |
| Site Details* | | |
| 3 | Address of the Rooftop Project Site: * | H No: |
| | | Street Name: |
| | | Village Name: |
| | | District Name: |
| | | State: |
| | Pin Code: | |
| 4 | Phone / Mobile no. * | |
| 5 | Email Id: | |
| 6 | Electricity Consumer No. * | |
| 7 | Category (Please) * | <input checked="" type="radio"/> Residential |
| 8 | Installed Plant Capacity (kWp) * | |
| 9 | Connected load (kVA) * | |
| 10 | Voltage level at interconnection * | <input type="checkbox"/> 415 V <input type="checkbox"/> 11 kV <input type="checkbox"/> above 11 kV |
| 11 | Nearest Transformer Details | Location: Capacity: |
| 12 | Details of Inverter with Anti-Islanding Protection* Phase (Φ): (Please) Galvanic Isolation (Please) | Make: Capacity: <input checked="" type="radio"/> Single phase <input type="checkbox"/> 3-Phase <input checked="" type="radio"/> Inside Inverter <input type="checkbox"/> Outside Inverter |
| 14 | Both AC and DC components of the SPV power plants Earthed*: | <input type="checkbox"/> |
| 15 | CEIG Inspection required* | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 16 | If, Yes, Inspection date * (Attach copy of CEIG Certificate) | |
| 18 | Bank Account details | Account No. Bank Branch |
| 19 | Date of Grid Synchronization * | |
| 20 | Net metering and grid connectivity (Attach acknowledgment from | Applied on: |
| | | Fees Deposited On: |

| | |
|----------------------|--|
| DISCOM, if received) | |
|----------------------|--|

*to be provided mandatorily

It is certified that the information furnished above is true to the best of my knowledge.

Consumer /Authorised Signatory of Implementing Agency on behalf of consumer

(CFA Claim Letter on Company letter Head)

Ref No.....

Date:

To,

[Name and Address of State Implementing Agency]

Sub: Claim Letter for release of CFA for Solar Power Plant of kWp capacity installed at

Ref:

1. *Insert the name of State Implementing Agency* Allocation letter No.
2. *Insert the name of State Implementing Agency* Consent letter No.....

Dear Sir,

This is in reference to *Insert the name of State Implementing Agency* allocation and consent letter, We, (Name of Company) has successfully commissioned the kWp capacity rooftop solar plant installed at (Name, CA No. & Address Site).

As per the sanction order, (Name of Company) is entitled to CFA of Rs....., post successful installation, commissioning and inspection of the rooftop Solar Power Plant. Therefore, kindly release the CFA of Rs. (Rs. In words) at the earliest.

Thanks, and regards,

(Signature)

Signed and Stamp

(On non-judicial stamp paper of appropriate value)

INDEMNITY BOND

This Indemnity bond is made this _____ day _____ by M/s _____ having its registered office at _____ (herein after called as vendor which expression shall include its successors and permitted assigns) in favour of [*Name and Address of State Implementing Agency*], (hereinafter called *Insert the name of State Implementing Agency* which expression shall include its successor and assigns).

Whereas *Insert the name of State Implementing Agency* has sanctioned to the vendor following Solar projects vide its sanctions letters in terms of which *Insert the name of State Implementing Agency* is required to release CFA to the vendor for erection, operation and maintenance of Solar Power Plant:

| S. No. | Name & Address of Consumers | CA No. | Capacity of Plant |
|--------|-----------------------------|--------|-------------------|
| | | | |

And whereas by virtue of clause No..... of the said contract, the vendor is required to establish an Insurance Cover for third party liability, however same has not been established and therefore, executing an Indemnity bond in favour of *Insert the name of State Implementing Agency* for the purpose of performance of the contract (hereinafter called the CFA)

Now, therefore, this indemnity bond witnesses this as follows:

1. The contractor undertakes to keep *Insert the name of State Implementing Agency* harmless against any past, future unforeseen loss or damage due to any event/act occurred up to the period of commissioning that may be caused due to non-establishment of Insurance Cover under the contract against which the CFA has been released by *Insert the name of State Implementing Agency*.
2. This indemnity bond is irrevocable. The vendor to execute the project in part / full as per the terms and conditions of the contract, shall be deemed to be a breach of contract and the vendor shall forthwith return the CFA with interest @ 18% upon demand from *Insert the name of State Implementing Agency* without demur, reservation or protest and without reference to any arbitrator / tribunal or any other authority whatsoever.
3. Now, the condition of this bond is that if the contractor shall duly and punctually comply with the terms and conditions of this bond to the satisfaction of *Insert the name of State Implementing Agency*, then the above bond shall be void, but otherwise, it shall remain in full force and virtue.

In witness where of the vendor has here–unto set its hand through its authorized representative under the common seal of the company, the day, month and year first above mentioned.

Witness I

Authorized Representative

For and on behalf of M/s

Signature
Name
Address

Signature
Name
Address

Witness II

Authorized Representative

Signature
Name
Address

(Bond should be duly notarized)

Note: **Indemnity Bonds are to be executed by the authorized persons and (i) In case of contracting Company under common seal of the Company or (ii) having the power of attorney issued under common seal of the company with authority to execute Indemnity Bonds, (iii) In case, (ii) the original Power of Attorney if it is specifically for our contract or a Photostat copy of the Power of Attorney if it is a General Power of Attorney and such documents should be attached to Indemnity Bond.*

Joint Inspection Report

It is to certify that a Grid Connected Solar PV Power Plant has been installed with following details:

1. Name of the beneficiary: _____
2. Address of installation with pin code: _____
3. Electricity consumer number: _____
4. Solar PV module capacity (DC): _____ kWp
5. Inverter capacity (AC) (Nominal output power): _____ kW
6. Date of installation: _____
7. Date of commissioning (after installation of net-meter): _____
8. Date of Joint inspection: _____
9. Metering arrangement: _____ (Net meter/Gross meter/Net billing)

The above system is as per BIS/MNRE specifications and has been checked for its performance on _____ and it is working satisfactorily.

| | DISCOM | EMPANELLED AGENCY | CONSUMER |
|-------------|---------------|--------------------------|-----------------|
| Name | _____ | _____ | _____ |
| Designation | _____ | _____ | _____ |
| Date | _____ | _____ | _____ |
| Sign | _____ | _____ | _____ |
| Seal | _____ | _____ | _____ |

It is to certify that the above system has been purchased with following details:

1. Total project cost ₹ _____
2. CFA amount ₹ _____
3. Amount paid by beneficiary ₹ _____

| | EMPANELLED AGENCY | CONSUMER |
|-------------|--------------------------|-----------------|
| Name | _____ | _____ |
| Designation | _____ | _____ |
| Date | _____ | _____ |
| Sign | _____ | _____ |
| Seal | _____ | _____ |

DASHBOARD COMPONENTS**SITE LIST**

| Column | Description |
|-------------------|---|
| Site Name | Consumer Name or CA no. where solar rooftop PV plant is installed |
| Address, Zip code | Location and Division details |
| Peak Power | Displays the peak power from solar array |

DASHBOARD

| Column | Description |
|-------------------------------|---|
| Site Selection Menu | Typically, a list of all the solar plants installed in the licensed area |
| Overview Bar | Displays the current power generated in AC from inverter/s, Energy today and Monthly total energy |
| Site Summary | Display the relevant details of the plant |
| Power & Energy | Displays the power and energy graphs which shows the power and energy over a period of time and enables the download of the graphs in all major formats, such as xls, png and jpg |
| Weather | Displays the local weather conditions, like minimum and maximum temperature, clouds conditions |
| Solar Radiation (Irradiation) | Displays the daily or monthly peak sun hours from NASA, IMD or MNRE database |

PLANT DETAILS

| Column | Description |
|-------------------|--|
| Plant Capacity | Installed Capacity (in kWp) |
| Module details | Make and electrical Specification |
| Module Serial No. | RFID |
| Last Measured | 10-15 mins reading (data fetching frequency) |
| Current (Amp) | Module output current/Inverter input current |
| Voltage (V) | Module output voltage/Inverter AC voltage |
| V DC | Inverter DC voltage |
| Energy (Wh) | Inverter energy |

Check list for offline documents:

| S. No. | Documents Details | Attached, (Yes/ No) |
|---------------|---|----------------------------|
| 1. | Covering letter as per Format-1 . | |
| 2. | General Particulars as per Format-2 . | |
| 3. | Original copy of the Bid Bond as per Format -3 in the form of a Bank Guarantee/ DD / FDR. Check list as per Format-5 or in case of exemption copy of valid MSME/NSIC/ DIC/ DIPP registration. | |
| 4. | DD/ Bankers cheque for an amount as per Bid Information Sheet, drawn in favour of <i>[Insert the name of Implementing Agency]</i> against payment of tender processing fee. | |
| 5. | Original Power of Attorney supplemented with Board resolutions for PART-A, B, C & D (as per Format-6), if applicable. | |
| 6. | Financial eligibility criterion (as per Format -7). | |
| 7. | Certificate for certificate of relationship of Parent Company or Affiliate with the Bidding Company (as per Format -8), if required. | |
| 8. | Undertaking from the Financially Evaluated Entity or its Parent Company/ Ultimate Parent Company (as per Format -9), if required. | |
| 9. | Original copy of the Consortium Agreement as per Format-10 , if any (for PART- A, B, C & D) | |
| 10. | Share Holding certificate (Format -11). | |
| 11. | Self-Declaration, Annexure-G for PART- A, B, C & D | |
| 12. | The Passphrase to decrypt the relevant Bid-Part in a sealed envelope before the start date and time of the Tender Opening Event (TOE). | |

Check list for online documents:

| S. No. | Documents Details | Attached, (Yes/ No) |
|---------------|---|----------------------------|
| 1. | Certificate of incorporation and Updated Memorandum of Association (MoA). | |
| 2. | Scanned copy of DIPP/MSME/NSIC registration certificate. | |
| 3. | Declaration on bidder's letterhead for Non blacklisting from any Government Department/ PSU/ SEB's. | |
| 4. | PAN registration. GST registration. | |
| 5. | For meeting technical eligibility criterion: Scanned copy of the Commissioning certificate and Work order/ Contract/ Agreement/ from the Client/ Owner. | |
| 6. | For meeting financial eligibility criterion: scanned copy Balance showing Annual Turnover or Net worth. | |
| 7. | Acceptance of RFP terms and conditions including amendments & clarification on letter head of the bidder. | |

Reference Bidders' Declaration Format associated with Implementation of ALMM Order

(On the letterhead of the bidder)

Declaration

To whomsoever this may concern

Reference: (RFP no. and description)

1. We hereby declare that we are fully aware of the binding provisions of the ALMM order and the Lists thereunder, while quoting the rate in the tender no. [*tender number*] floated by [name if tendering authority]
2. We understand that the List – I (Solar PV Modules) of ALMM Order, Annexure – I of the O M, issued by MNRE on 10th March 2021 will be updated by MNRE from time to time. We also understand that the Modules to be procured for this project, shall be from the List – I of the ALMM order applicable on the date of invoicing of such modules.
3. We further understand and accept that we shall be liable for penal action, including but not limited to blacklisting and invocation of Performance Bank Guarantee, if we are found not complying with the provisions of ALMM Order, including those mentioned above.

Name:

Designation:

Organization:

Date:

(Signature and Stamp)

Standard Operating Procedure (SOP) for Installation and Metering Connection of Grid Connected Solar Rooftop PV Systems by DISCOMs

| ACTIVITY | RESPONSIBILITY | TIMELINE (Max Working Days) |
|--|--------------------------------------|---|
| Submission of Application | CONSUMER | Zero Date |
| Acknowledgment of Application by DISCOM | DISCOM | 02 |
| Site Verification / Technical Feasibility & issuance of Letter of Approval (LOA) / Termination | DISCOM | 15 |
| In-Principle Approval for CFA | DISCOM | 10 |
| Execution of Metering Agreement | DISCOM & CONSUMER | 15-20 |
| Installation of Rooftop Solar System | DISCOM, Empanelled Vendor & CONSUMER | 90-180 |
| Meter Procurement Intimation | CONSUMER | 15 (prior intimating DISCOM on system readiness) |
| Submit Work Completion Report / Certificate | CONSUMER & Empanelled Vendor | 90-180 (from LOA) (depending upon capacity) |
| Inspection by CEIG (if applicable) | CEIG | 15 -20 |
| Issuance of Safety Certificate | CEIG (if applicable) | 5-10 |
| Intimation to Install Meter | CONSUMER | 7-10 |
| Inspection by DISCOM, Installation of Meter [2] and Commissioning of the System | DISCOM [3] | 15 – 20 (after CEIG approval) |
| Inspection for Release of CFA [4] | DISCOM | 07-10 |
| Release of CFA | DISCOM | 05-10 |
| Billing Process | DISCOM | 30 (After synchronization with Grid) |

Format for Bid Security Declaration

(To be submitted separately for each Project Group)

(To be stamped on non – judicial stamp paper as per the stamp act of the state where the document is made)

Ref: _____

Declaration No.: (Insert Name of Project Group)

Date: _____

Subject: Declaration of bid security requirement.

We, _____ (insert name of the Bidder) hereby provide this undertaking to [*Insert the name of Implementing Agency*], in respect to our response to RfP vide RfP No. _____ dated _____. We undertake that we will abide by the provisions of the RfP for the activities pertaining to submission of response to RfP, during the bid validity period. We undertake not to withdraw or modify our bid during the bid validity period, in line with provisions of the RfP. In case we withdraw or modify our response to the RfS during the bid validity period, or violate other provisions of the RfP which make the bid non-responsive under Clause 4.2 of the RfP, we, _____ (insert name of the bidder) including our Parent, Ultimate Parent, and our Affiliates shall be suspended/debarred from participating in upcoming tenders issued by any department of Odisha Government for a period of 5 years from the date of default as notified by [*Insert the name of Implementing Agency*].

(Name and Signature of the Authorized Signatory)

**Undertaking/Self- Declaration for domestic content requirement fulfilment
(On a plain Paper)**

This is to certify that M/S.....[Company Name] has installedKW [Capacity] Grid Connected Rooftop Solar PV Power Plant for..... [Consumer Name] at [Address] under sanction number.....dated.....[sanction date] issued by.....[DISCOM Name].

It is hereby undertaken that the PV modules installed for the above-mentioned project are domestically manufactured using domestic manufactured solar cells. The details of installed PV Modules are follows:

1. PV Module Capacity:
2. Number of PV Modules:
3. Sr No of PV Module
4. PV Module Make:
5. Purchase Order Number:
6. Purchase Order Date:
7. Cell manufacturer's name
8. Cell GST invoice No

The above undertaking is based on the certificate issued by PV Module manufacturer/supplier while supplying the above-mentioned order.

I,on behalf of M/S.....[Company Name] further declare that the information given above is true and correct and nothing has been concealed therein. If anything is found incorrect at any stage then the due Central Financial Assistance (CFA) that I have not charged from the consumer can be withheld and appropriate criminal action may be taken against me and my company, as per law, for wrong declaration. Supporting documents and proof of the above information will be provided as and when requested by MNRE/state implementing agency.

(Signature With official Seal)
For M/S.....
Name.....
Designation.....
Phone.....
Email.....

Agreement between Vendor and beneficiary for additional cost

This agreement is signed between two parties i.e., M/s (Name of Vendor) registered at address, who is an empanelled vendors in the tender floated by Name of Implementing agency for implementation of grid connected rooftop solar (GCRTS) PV projects in the state/operational area of name of state/Name of Discom, hereby referred to in as the 'Vendor' or 'first party' AND (Name of Consumer, residing at.....) , hereby referred to in as the 'customer' or 'second party'.

Both the parties mentioned above, by mutual consent, are entering into an agreement for installation of grid connected rooftop solar project under Phase-II of grid connected rooftop solar programme of MNRE, being implemented by Name of implementing agency in the state/operational area of name of state. The second party has satisfied itself that the first party is an empaneled vendor in the tender floated by Name of Implementing agency and rooftop solar project ofkW capacity will be installed by first party at the residence of second party, under the tender floated by Name of Implementing agency.

Both the parties referred above, do hereby declare that they are aware of the fact that the L-1 price discovered in the tender floated by Name of Implementing agency is Rs. /kW. However, the second party has agreed to pay additional cost to the first party for desired customization in the project which is in the form of (mention the customizations).

The first party hereby declares that the invoice raised to the second party for amount mentioned above, is on actual basis and the cost of any customization is mentioned separately , while no other extra/hidden charges are being charged to the second party. The second party hereby declares that they are aware of the provisions of the scheme and do hereby consent to pay the additional cost of customization to the first party for the desired customizations. MNRE and the implementing agency shall not be, in any case, be held responsible for any dispute arising out of this agreement/financial transactions.

This agreement is entered intoday of the month ofin year.....

For First Party
(Name of Company)

For Second Party
(Name of Consumer)