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E-TENDER DOCUMENT

For

**Request for Selection (RFS) of Bidders for the
Implementation of 1.5 MWp Grid connected Floating Solar PV Project at
Willingdon Island, Cochin Port Authority including Operation and Maintenance
for 25 years under RESCO model**

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DISCLAIMER

Though adequate care has been taken while preparing the RfS document, the bidder(s) shall satisfy themselves that the document is complete in all respects. Intimation regarding any discrepancy shall be given to the office of Employer /Owner immediately. If no intimation is received from any bidder on or before the Pre bid meeting , it will be considered that the document is complete in all respects and has been received/ acknowledged by the bidder(s).

Cochin Port Authority (CoPA) reserves the right to modify, amend or supplement this document.

While this RfS document has been prepared in good faith, neither Cochin Port Authority nor their employees or advisors 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 document, even if any loss or damage is caused by any actor omission on their part.

Place: Kochi

Date: 30/12/2024

SECTION-I
INVITATION FOR BIDS (IFB)

FOR

Selection of Solar Power Developers for “Implementation of 1.5 MWp Grid connected Floating Solar PV Project at Willingdon Island, Cochin Port Authority, including Operation and Maintenance for 25 years under RESCO model”

The tender is invited under two cover system from the experienced **Solar Power Developers** (here in after referred as SPD under RESCO model) through Government e-market place (the GeM portal. For submitting the e-tender, the prospective bidders willing to participate in this tender are required to get registered with Government e Market place (GeM). Tender timeline is available in the BID INFORMATION SHEET given in the tender document.

(SINGLE STAGE TWO COVER BIDDING)
under e-Tendering mode through GeM

- 1.0 Cochin Port Authority, Cochin (formerly Cochin Port Trust), a Body Corporate under the Major Port Authorities Act, 2021, (hereinafter called “CoPA”) is an Autonomous body under the Ministry of Ports, Shipping and Waterways (MoP,S&W). Cochin Port Authority has to comply with the Ministry’s directions in implementing and facilitating Green Port Initiative for development, and promotion of solar energy technology. Moreover CoPA is a Deemed Distribution Licensee for electricity in Port area at W. Island and Vallarpadam & Puthuvypin as per Electricity Act 2003. CoPA has to comply with the Renewable Power Obligations in accordance with KSERC (Renewable Energy and Net Metering Regulations) 2020/KSERC (RE and Net Metering) (First Amendment) Regulation 2022 as amended from time to time.
- 2.0 Ministry of Ports, Shipping and Waterways (MoP, S&W) under the **Maritime India Vision 2030** (MIV 2030) has set a target of achieving 60% of total power requirement in Major Ports through renewable energy by the year 2030 and in accordance with that, Cochin Port Authority (CoPA) wishes to invite proposals for setting up of grid connected Floating Solar Power Projects to be installed in the Backwaters near CoPA’s Walkway Avenue between BOT Junction and Kannangatt bridge at W/Island, Cochin, Kerala, under RESCO model for an aggregate capacity of 1.5 MWp. Cochin Port Authority (CoPA) shall enter into Power Purchase Agreement (PPA) with the Solar Power Developer within 60 (Sixty) days from the date of LoA or within one month from the date of approval of PPA by KSERC.

3.0 PUBLIC PROCUREMENT POLICY:

Ministry of New & Renewable Energy (MNRE) Order No 283/22/2019-Grid Solar Dated 23rd Sep 2020 for the Public Procurement (Preference to Make In India) including any amendments thereto, so as to Provide Purchase Preference (linked with local content) with respect to Renewable Energy (RE) Sector & Department for promotion of Industry and Internal Trade (DPIIT) Notification No. P-45021/2/2017-PP (BE-LI) dated 4th June, 2020 including any amendments, the procurement of Solar Modules & Solar Cells for the subject tender will be supplied through Class I Local Suppliers only. A Class-I local supplier' means a Supplier or Service Provider, whose Goods, Services or works offered for Procurement, has Local Content equal to or more than 50%, as defined under the above said orders.

4.0 APPROVED LIST OF MODELS & MANUFACTURES:

The provisions as contained in the O.M. dated 05/04/2022 issued by MNRE on the subject "Approved Models and Manufacturers of Solar Photovoltaic Modules (requirement of compulsory registration) Order, 2019-Implementation." and its subsequent amendments and clarifications, shall be applicable for this tender. The Cells and Modules used in this tender shall be sourced only from the Models and Manufacturers included in the List-I (Solar PV Modules) of ALMM Order, Annexure-I of the OM, issued by MNRE on 05/04/2022 which will be updated by MNRE from time to time. Latest revision is on 22/03/2024) The modules to be supplied under this tender, shall be from the ALMM order applicable on the date of invoicing of such modules. Bidders shall also provide a disclosure regarding that they are aware of binding provisions of the ALMM order and the list(s) thereunder, while quoting for the tender. The equipments and spares used in the solar project shall be of MNRE rules and guidelines.

5.0 OVERVIEW OF THE RfS

Solar Power Developer (herein after referred to as SPD selected by CoPA based on this RfS, shall conduct Site Survey, Design, obtain Statutory Approvals, Engineering, Manufacture, Supply, Storage, Civil work, Erection, obtain CEA approval, Testing & Commissioning of 1.5 MWp Grid Connected Floating Solar PV Project in the Backwaters near CoPA's Walkway Avenue between BOT junction and Kannangatt bridge at W/Island, Cochin Port Authority, Kerala, generated Power Transmission to 11kV grid of Port's 110kV substation at Willingdon Island, including Operation & Maintenance (O & M) of the project for a period of 25 (Twenty Five) Years under RESCO Model after Operational Acceptance" in accordance with the provisions of this RfS document and Power Purchase Agreement (PPA).

6.0 The Cochin Port Authority (CoPA) shall enter into PPA with selected SPD within 90 (ninety) days from the date of LoA or within one month from the date of approval of PPA by KSERC for a period of 25 years from the date of commercial operation of the project. The maximum tariff payable to the Project Developer will be fixed/approved by the KSERC after the bidding process. The Bidders will be free to avail fiscal incentives like Accelerated Depreciation, Concessional Customs and Excise Duties, Tax Holidays if available and at the responsibility of SPDs and the bidders shall note that the concessions in the duties cannot be claimed as a right for increase in tariff later on and whatever tariff quoted and approved by KSERC will be final. The tariff quoted by the bidder will be **provisional** and subject to change

and Cochin Port Authority shall conduct Reverse Auction among the Pre qualified Bidders and the tariff approved by the Kerala State Regulatory Commission (KSERC) will be Final and accepted.

7.0 Bidders shall submit their bid by offering a single tariff which shall be applicable during the entire operation and maintenance period of 25 years. There shall not be any upward revision in the approved tariff.

8.0 No transfer or selling of the plant to the third party is allowed during PPA period without the consent of CoPA and without remittance of necessary fees to CoPA as applicable. If the Project is transferred or sold to a third party during its tenure after commercial operation, CoPA reserves the full right to operate the Solar plant with the other SPD at its discretion.

9.0 SELECTION OF TECHNOLOGY & ELIGIBLE PROJECTS UNDER THIS RFS

The Projects to be selected under this RfS for aggregate capacity of 1.5MWp for implementation of Floating Solar PV Projects and are to be installed in the Backwaters near the CoPA's Walk way Avenue between BOT junction and Kannangatt Bridge at W/Island, Kochi, Kerala, India. The selection of solar PV modules and other equipments shall be of the latest technology prevailing in the market and as per MNRE standards / guidelines and as detailed at Condition No 4.0 above

10.0 GENERAL

The Invitation for Bids is open to all eligible bidders meeting the Minimum Qualification Criteria. The complete RfS Documents are available in the GeM portal www.gem.gov.in/, and the CoPA website www.cochinport.gov.in as well as in the Central Public Procurement Portal of Govt. of India, www.eprocure.gov.in. Interested bidders shall download the RfS Documents from these portals as per the provisions available therein. Tenders attaching all documents shall be submitted through GeM portal strictly in accordance with the instructions to bidders (ITB), terms and conditions of the tender document, before the tender submission time mentioned in the tender.

11.0 Interested bidders have to necessarily register themselves in the GeM portal to participate in the tender. For proper uploading of the bids on the portal namely www.gem.gov.in/ (hereinafter referred to as the 'portal'), it shall be the sole responsibility of the bidders to appraise themselves adequately regarding all the relevant procedures and provisions as detailed in the portal as well as by contacting GeM, through e-mail to :helpdesk-gem@gov.in or call on Toll Free Numbers (Inbound):[1-1800-419-3436](tel:1-1800-419-3436)/[1-1800-102-3436](tel:1-1800-102-3436) (9:00am-6:00 pm Mon to Sat) Help Desk Outbound No's: +911244875125 & +917556685120, as and when required, contact details are also mentioned on the Bid Information Sheet. The Employer in no case shall be responsible for any issues related to timely or properly uploading/submission of the bid in accordance with the relevant provisions of Section II - ITB of the Bidding Documents.

12.0 A Single Stage Two Cover Bidding Procedure with Earnest Money Deposit (EMD) will be adopted and will proceed as detailed in the RfS Documents.

13.0 Bidders should submit their bid proposal online complete in all aspects on or before last date and time of Bid Submission as mentioned on Portal of GeM (www.gem.gov.in) and as indicated in the Bid Information Sheet.

- (i) Bidder shall submit bid proposal along with Earnest Money Deposit (EMD), complete in all respects as per the Bid Information Sheet. Techno-Commercial bids will be opened online in the GeM Portal. Bid proposals received without the prescribed Earnest Money Deposit (EMD)/Documents for exemption of EMD will be considered as non-responsive.

In the event of any date indicated is a declared Holiday, the tender will be opened on the next working day.

- (ii) Bank details of Cochin Port Authority:

Bank details of Cochin Port Authority are as follows for online payment of EMD:

State Bank of India, Cochin Port Authority Branch, Bank Branch MICR code: 682002021, IFSC Code: SBIN0006367, Cochin Port Authority General Reserve Fund (GRF), Savings Bank Account No. 41401802288.

- (iii) Exemption from the payment of EMD and Cost of Tender document shall be given to Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organization or the concerned Ministry or Department as provided in GFR 2017.

14.0 RfS documents which include Eligibility Criteria, Technical Specifications, various Conditions of Contract, Formats etc. can be downloaded from GEM Portal (www.gem.gov.in) or from CoPA website (www.cochinport.gov.in) or Central Public Procurement Portal of Govt. of India, www.eprocure.gov.in. Any amendment(s)/ corrigendum(s)/ clarification(s) with respect to this RfS shall be uploaded on the above mentioned websites only and no intimation will be sent to the individual bidders. The Bidder should regularly check for any Amendment(s)/ Corrigendum(s)/ Clarification(s) on the above mentioned websites.

15.0 The detailed Qualifying Requirements (QR) are given in Section-III of the RfS., if required.

16.0 CoPA reserves the right to conduct Reverse Auction, as per provisions of RfS documents.

17.0 The bidders have to execute an “ Integrity Pact ”(IP) as per the format available in the CoPA’s website www.cochinport.gov.in. The Tenderer should sign and upload the “Integrity Pact” duly signed in all the pages duly affixing the firm’s seal.

18.0 The Independent External Monitors (IEM) for Cochin Port are as follows:

- 1) Shri. M J Joseph, ICAS (Rtd.)
37, Da Costa Square
3rd Cross, Cooke Town
Bangalore - 560 084
Email: joseph.iem@cochinport.gov.in

- 2) Shri. Punati Sridhar, IFoS(Retd)
8C, Block -4, 14-C Cross,
MCHS Colony, HSR 6th Sector,
Bangalore -560102
Email ID :sridhar.iem@ cochinport.gov.in

- 19.0** The bidder should not have been blacklisted or debarred by any Central/ State Government Agency of Central/State Government/Public Sector Undertaking/ Regulatory Authority of India at the time of submission of this bid.
- 20.0** CoPA reserves the right to cancel/ withdraw this invitation for bids without assigning any reason and shall have no liability what so ever consequent upon such a decision.
- 21.0** Electrical works should be carried out through a licensed Electrical contractor since clearance has to be obtained from the Central Electricity Authority (CEA). The Electrical contractor engaged by the SPD shall hold valid "A-Class" license. A copy of the license shall be submitted along with tender or furnish an undertaking that the SPD shall tie-up with a contractor having A class Electrical license in the case of award contract.
- 22.0** All the statutory clearances shall be obtained for setting up of the Floating solar plant in the water body.

23.0 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 documents 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.

24.0 BID INFORMATION SHEET

The brief details of the RfS are as under:

A	RfS NO. & DATE	GEM/2023/B/... dated -----
B	Document Description	Implementation of 1.5MWp grid connected floating solar PV power plant for Cochin Port Authority under RESCO model.
C	NAME OF WORK/ BRIEF SCOPE OF WORK/ JOB	Selection of Solar Power Developer as per the approval of KSERC for the Site Survey, Design, Engineering, Manufacture, Supply, Storage, Civil work, Erection, TPIA inspection, Central Electricity Authority approval, Testing and Commissioning of 1.5MWp Grid Connected Floating Solar PV Project in the Backwaters near CoPA's Walkway Avenue between BOT Junction and Kannangatt bridge at Willingdon Island, Cochin, Kerala and interconnect solar power to the Port's 11kV grid at 110kV substation of CoPA at Willingdon Island with new 11 kV VCB panel by coupling to existing 11 kV bus, including SCADA, Operation & Maintenance (O & M) of the project for a period of 25 (Twenty Five) Years under RESCO Model, after Operational Acceptance, subject to obtaining KSERC approval for the tariff quoted by the lowest bidder after reverse auction and for the PPA.
D	ESTIMATED VALUE	Rs.6,25,50,000/- (Rupees Six Crore Twenty five Lakh Fifty Thousand only). As per the estimated cost of the project, the SPD has to provide at his cost, solar plant 11kV switchgears, transformers, supply and laying of UG cables of approx. 3.5km length, metering and protection devices, SCADA facility etc. as per standards and interconnect solar power to the Port's 11kV grid at 110kV substation.
E	TYPE OF BIDDING SYSTEM	E-TENDER through GeM portal (www.gem.gov.in)
F	TYPE OF RfS/ TENDER	Single stage 2 cover system with EMD
G	COMPLETION/ CONTRACT PERIOD	12 months from the date of signing of PPA as per Clause No. 20, Section-II, Instructions to Bidders (ITB) of RfS
H	BID PROCESSING FEE (Tender document Cost)	Not applicable since bidding is through GeM

I	Bid Bond / EARNEST MONEY DEPOSIT (EMD)/Payment on order Instrument.	Amount: 2% of the Estimated cost, i.e. Rs.12,51,000/- (Rupees Twelve lakh fifty one thousand only) (EMD shall be furnished in the form of Account Payee Demand Draft, Fixed Deposit Receipt, /Banker's Cheque or Bank Guarantee/ Payment on Order Instrument from any of the Commercial Banks, in favour of "FA&CAO, Cochin Port Authority", payable at Cochin or online payment in an acceptable form safeguarding the purchaser's interest in all respects. Exemption shall be granted on submission of NSIC/ MSME/ UAM certificates.)
J	PERFORMANCE BANK GUARANTEE (Security Deposit)/ Payment on order Instrument.	As per Tender Document (Security Deposit shall be furnished in the form of Account payee demand draft, Fixed deposit Receipt from a Commercial bank, Bank Guarantee from a commercial bank/ Payment on order instrument in favour of "FA&CAO, Cochin Port Authority"" payable at Cochin or online payment in an acceptable form safeguarding the purchaser's interest in all respects.
K	DATE, TIME & VENUE OF PRE-BID MEETING	23.01.2025 at 11 am through Video Conferencing.
L	ONLINE BID-SUBMISSION DEADLINE DATE	03.02.2025 at 3 pm.
M	TECHNO-COMMERCIAL BID OPENING	The bids will be opened in the GeM portal on line
N	PRICE BID OPENING	Date and time will be informed later to the eligible bidders.
O	CONTACT DETAILS OF GEM	Mail at: helpdesk-gem@gov.in
P	NAME, DESIGNATION, ADDRESS AND OTHER DETAILS (FOR SUBMISSION OF RESPONSE TO RFS)	The Chief Mechanical Engineer, Cochin Port Authority, 1st floor, New Administrative Building, W/Island, Kochi-9 Tel. 0484-2666639, 2582300, Mobile no. 9444610664 Fax:- 0484-2666639 Email : cme@cochinport.gov.in
Q	DETAILS OF PERSONS TO BE CONTACTED IN CASE OF ANY ASSISTANCE REQUIRED	<ol style="list-style-type: none"> 1. Shri. A. Jayasimha, CME Ph: 0484-2666639, 2582300 Mobile no. 9444610664 2. Shri. Ajithkumar D., SE(Ele) 3. Ph: 0484-2582320 4. Smt. Jayalakshmy.S, EE(Ele) Phone no.. 0484-2582360 5. Smt. V. Mini , AEE(Ele), Phone no. 0484-2582307

Note:

1. Bids must be submitted strictly in accordance with the tender conditions .ie Section-II, Instructions to Bidders (ITB)
2. Any bidder, who meets the Qualifying Requirement and wishes to quote against this RfS, may download the complete RfS document along with its amendment(s) if any from the Portal of GEM (www.gem.gov.in) and/ or CoPA website (www.cochinport.gov.in) or Central Public Procurement Portal of Govt. of India www.eprocure.gov.in and submit their Bid complete in all respects as per terms & conditions of RfS Document on or before the due date of bid submission. In GeM Portal. Clarification(s)/ Corrigendum(s) if any shall also be available on above referred websites and no separate intimation will be sent to the bidders.
3. Prospective Bidders are requested to remain updated for any amendment(s)/ corrigendum(s)/ clarification(s) etc. to the RfS document through the website www.gem.gov.in. No separate intimation will be sent to the individual bidders. Intimation regarding notification on the above shall be updated on www.cochinport.gov.in, www.gem.gov.in. as well as on Central Public Procurement Portal of Govt. of India, www.eprocure.gov.in.

SECTION - II

INSTRUCTIONS TO BIDDERS (ITB)

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Preamble

This part (Section - II) of the RfS Documents provides the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the Employer. It also provides information on bid submission and uploading the bid on GeM portal (<https://gem.gov.in/>), bid opening, evaluation and onward of contract..

Bidders may note that the respective rights of the Employer/ Owner and Bidders/ Contractors shall be governed by the RfS Documents/ Contracts signed between the Employer/ Owner and the Contractor for the respective package(s). The provisions of RfS Documents shall always prevail over any other documents in case of contradiction.

Further in all matters arising out of the provisions of this Section - II and the RfS Documents, the laws of the Union of India shall be the governing laws and courts of Kochi shall have exclusive jurisdiction.

1 OBTAINING RfS DOCUMENTS

The RfS document can be downloaded from the Portal of GEM (www.gem.gov.in). The same is also available at www.cochinport.gov.in and Central Public Procurement Portal of Govt. of India, www.eprocure.gov.in.

1.1 Bid document has been prepared in accordance with MoP's Resolution no. 27/01/2023-RCM Dtd: 28/07/2023

1.2 Unless explicitly specified in these Guidelines, the provisions of these Guidelines shall be binding on the Procurer/ Intermediary Procurer/ End Procurer and the Authorised Representative of the Procurer and the same needs to be strictly followed for such bidding to be eligible under section 63 of the Electricity Act. However, in case it becomes imperative to deviate from the provisions of these Guidelines, the process to be adopted is specified in Clause 16 of the **MoP Guidelines** Dtd 28/07/2023. .

1.3 Arrangements related to Commencement of Supply

The RfS may specify additional milestones for the project with respect to land acquisition, connectivity etc. as well as regular reporting requirements by the Generator and shall specify penalties with respect to noncompliance with such milestones/requirements. Obtaining all clearances, permits, licenses including arrangement of land and connectivity to the Grid and access (if applicable) prior to scheduled date of commencement of supply of power shall be the responsibility of the Generator and the Procurer shall not be responsible in case of delay in obtaining such clearances, permits, licenses etc.

1.4 TARIFF

1.4.1. A single tariff for supply of Solar power shall be quoted by the bidders (the "Tariff").

1.4.2. The Tariff shall be quoted at the Delivery Point which shall be at the interconnection point at CoPA's 110 kV substation. All charges and losses till the delivery point shall be borne by the Generator.

1.4.3 Tariff as the Bidding Parameter:

The bidding evaluation parameter shall be the tariff per unit supply of solar power, fixed for the entire term of the PPA. The Procurer shall invite bids wherein the bidder shall quote the Tariff in Rs./kWh. The bidder shall be selected on the basis of least quoted Tariff. Subsequent to the e-reverse auction, the bidder (called the L1 bidder) quoting the least Tariff (called the L1 tariff) shall be allocated the quantum of power offered by him. **The capacity allocation shall be on the basis of Bucket filling. i.e, capacity quoted by L1 bidder at L1 rates shall be allocated**

first. Then the capacity quoted by the next lowest bidder (called the L2 bidder) at the rates quoted by him (called the L2 rates) may be allocated and so on. However, the allocation will only be made to the bidders whose bid falls within a predefined "Range" from the L1 tariff, as stipulated in the RfS. Thus, after arranging the bidders in the ascending order of tariff, the Project capacities will be awarded only to those bidders whose final price bids are within a range of "L1+x%", in terms of INR/kWh; while the value of "x" generally be two (2) to five (5) and shall be fixed in the RfS

2. COST OF DOCUMENTS/ PROCESSING FEE

The Bid Processing Fee / Cost of RfS is not applicable since bidding is through GeM. Bidders who are registered with MSME/ NSIC/UAM under the Ministry of MSME and as per MSE procurement policy, Micro and Small Enterprises shall be eligible for exemption of EMD. The scanned copy of the above mentioned certificate shall be uploaded in the GeM Portal along with the Technical bid.

3 TOTAL CAPACITY OFFERED

- (a) Selection of Grid Connected Floating Solar Power Projects for total capacity of grid connected 1.5MWp (A.C.) shall be of any of the following sizes:
- (b) The project site shall be either a single module of 750 Mtrs long along the canal shore with 20 Mtrs, width towards water body (Total area 15000 Sqmtr) or 2 segments on both sides of small culvert each having 375 Mtrs long on both sides with 20 Metres towards water body and so on. The design of solar panel positioning / layout shall be in such a manner that its should not affect the Environment and social conditions.
- (c) The Project comprises "Selection of Solar Power Developer for the Site Survey, obtaining Statutory Approvals, PPA approval from KSERC, Design, Engineering, Manufacture, Supply, Storage, Civil work, Erection, CEA approval, Testing and Commissioning of 1.5MWp Grid Connected Floating Solar PV Project, in the Backwaters near CoPA's Walkway Avenue between BOT junction and Kannangatt bridge at Willingdon Island, Cochin, Kerala, Transmission of solar Power upto 11kV grid of Port's 110kV main receiving substation at Willingdon Island. The Project to be selected under this RfS including Operation & Maintenance (O & M) of the project for a period of 25 (Twenty Five) Years under RESCO Model after Operational Acceptance."
- (d) CoPA's Power purchase agreement with M/s. KSEBL is for 6.5 MVA at 110kV level in Bulk supply tariff at W.Island. Average monthly consumption of CoPA is 25 lakh units at W. Island. KSERC has permitted CoPA to export the surplus power to KSEB Ltd' grid as per the Order of the Hon'ble KSERC dated 25/04/2023.
- (e) The interested Bidders are required to participate in the Request for Selection (RfS) for installation of Grid Connected Floating Solar Photovoltaic Power Plants on RESCO Model.
- (f) The bidder shall supply and lay 11 kV cables, supply and install necessary switchgears including VCB panels compatible to interface with SCADA to connect the solar plant to the 11 kV grid of Cochin Port at 110 kV substation with necessary switchgears/VCB panels, necessary protection relays, monitoring panels, metering arrangement including SMART meter for integrating with present AMI system etc. Any modifications of existing 11kV grid for enabling the connectivity is under contractor's scope. The bidder shall ensure 1.5MWp at 11kV as per the standards. At the 11kV side, the AC output shall be 1.5MWp at standard test conditions. The SPD shall provide the connectivity at 110kV substation by providing suitable inverter

transformers, 11kV cables, 11KV switch gears, metering equipments including meters (both solar meter and grid meter) etc and the SPD shall make all arrangements so that the power generated from the solar power project shall be brought to the existing 110kV substation of Cochin Port Authority, which is about 3.5km away from the substation at A2 area, complying with Central Electricity Authority Regulations relating to Construction Standards, Technical Standards, Safety Regulations, Grid Connectivity and Communication and State Load Dispatch Centre (SLDC) norms. The SPD shall submit the bid considering the cost for all the above items. The metering shall be done in accordance with CEA Metering regulations /KSERC regulation/ KSEBL rules in the 11kV side through bidirectional SMART meter at 110kV substation with necessary switchgears/ Panels and solar meter at solar plant premises. In connection with the Project work, CoPA shall assist the SPD for getting statutory approvals from the statutory bodies. The documentation required for statutory approval and charges shall be done by the SPD.

- (g) The SPDs shall demonstrate the Contracted Capacity at the Interconnection Point, as defined in the Commissioning Procedure enclosed in Annexure-A and Appendix-A-
- (h) The Cochin Port Authority at its discretion reserves the right to request the Solar Power Developer (SPD) selected through Tender process to install additional capacity of 25% over the present requirement of 1.5 MWp Floating Solar project if the levelised tariff approved by the KSERC and accepted by the Successful Bidder is found reasonable compared to the Bench mark price for the Kerala Region as may be decided by KSERC and based on the performance of the Solar PV Plant for a period of one year. ie if the Cochin Port wants to install the Additional capacity Grid connected Floating Solar PV Project of a further capacity of 0.375 MWp, the SPD shall carry out the additional capacity plant at the same rates, terms and conditions, subject to KSERC approval. The Bidders are requested to consider the above aspect while quoting the rates for the 1.5 MWp Floating Solar project in this Tender.

4 PROJECT CONFIGURATION

- a) The term "Project" shall have the meaning as defined in Section IV of the RfS, and shall refer to the cumulative Project capacity as quoted by/awarded to the Bidder.
- b) The Bidder may however, set up the cumulative Project capacity at a single location, or he may configure the "Project" as being sub-divided into two numbers of "Packages", being set up at multiple locations as approved by the Cochin Port Authority with due consideration of the following factors.
- c) A single tariff shall be quoted by the Bidder for the entire Project, irrespective of the Project configuration and the tariff quoted is subject to approval by KSERC and shall be binding on the SPD. The tariff shall include all the costs related to 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 25 years under RESCO model, 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 mentioned above.
- d) Power Purchase Agreement shall be executed within 60 days from the date of LOA or within 30 days from the approval of KSERC. PPA shall be executed after approval of the Hon'ble Kerala State Electricity Regulatory Commission.

- e) The entire Project shall have a single Effective Date of the PPA and single milestones for achieving Financial Closure and Commissioning, irrespective of the configuration of the Packages.

5 PROJECT LOCATION

The Solar PV project is planned to be implemented in the Edakochi Kayal portion of Vembanad Lake, in between the BOT Bridge and Kannaghat bridge adjacent to CoPA's Walkway Avenue in Willingdon Island (Figure-1) which is approx. 3.5km from the Port's main 110kV receiving station, and is anticipated to cover a water area of 20,000 m² in tidal-influenced Edakochi Kayal, it ensures the free flow of tidal water and the survey no. for the water body is 1166/1 of Rameswaram Village of Kochi Taluk. The ownership of the said survey no. is vested with Cochin Port Authority. The Northern side of the solar installation is the CoPT Avenue Walkway and the width of the water body is approx. 480m at this location. The mean Lower low water and mean higher high water heights are 0.3m and 1.2m respectively.

The SPD shall provide at his cost, required 11KV switch gears, transformers, transmission U.G cables, metering & Protection Devices, SCADA facility etc. As per standards and interconnect solar power to the Port's grid at 110kV substation. The project site shall be either a single module of 750 Mtrs long along the canal shore with 20 Mtrs width towards water body (Total area 15000 Sqmtr) or 2 segments on both sides of small culvert each having 375 mtrs long on both sides with 20 metres towards water body and so on.

A substantial portion of proposed location on either side of the culvert is covered through mangroves. Further the water body area near to the reclamation wall is currently very shallow and slushy for about 100 Mtr.

There is no lease or license will be levied by the Cochin Port Authority, being the project is for the self consumption, i.e., Cochin Port's own project.

The geographic location of the backwaters of CoPA Walkway is as follows:

Latitude:0955.7N Longitude:07616.6E

Location: <https://maps.google.com/?q=9.930979,76.279625>; Edakochi Kayal (Kochi, Kerala, India): <https://maps.google.com/?q=9.929129,76.277534> ; NH966B(NH966B, Kochi682006, Kerala, India):<https://maps.google.com/?q=9.928128,76.285858>.

Quality parameters of water at the site is Saline.

Site survey, Bathymetric study, water body characteristics, geo-technical investigations (on shore/off shore) etc., water properties (such as TDS content etc), depth of reservoir (Full Reservoir Level (FRL), Minimum Drawdown level (MDDL), Dead Storage level etc.), variation in the depth of water reservoir, water flow rate / current, climatic conditions have to be carried out after award of contract.

6 PROJECT SCOPE & TECHNOLOGY SELECTION

Under this RfS, the SPD shall set up Floating Solar Power Project(s), including the transmission and necessary infrastructure upto the Interconnection/Delivery Point in line with Clause No.8, Section-II, ITB, at its own cost and in accordance to the provisions of this RfS document. All approvals, permits and clearances required for setting up of the

Project including those required from State Government and local bodies shall be in the scope of the SPD. The SPD appointed shall obtain necessary CRZ clearance for the project from the concerned authorities like NCESS and KCZMA i.e Environmental clearance/Approval from statutory bodies and the Clearance from Pollution Control Board and other statutory bodies. All the expenses for obtaining the statutory clearances shall be borne by the SPD.

The SPD shall be required to follow the applicable rules regarding project registration with the Regulatory bodies, as required, in line with the provisions of the applicable policies/ regulations of the State. It shall be the responsibility of the SPD to remain updated about the applicable charges payable to the Regulatory bodies under the State Solar Policy.

7 MAXIMUM ELIGIBILITY FOR PROJECT CAPACITY ALLOCATION FOR A BIDDER

Following conditions shall be applicable to the Bidders for submission of bids against this RfS:

- (i) A Bidder including its Parent, Affiliate or Ultimate Parent or any Group Company can submit only a single bid for the project in the prescribed formats as detailed in Section-II, ITB, giving details of the Projects.
- (ii) The evaluation of bids shall be carried out as described in Section-V of RfS. The methodology for allocation of Projects is elaborated in Section-V of RfS.

8 CONNECTIVITY WITH THE GRID

The Project should be designed for interconnection with the 11kV grid at CoPA's 110kV main receiving substation in accordance with the prevailing CEA/ KSERC regulations/ SLDC norms. For interconnection with the grid and metering, the SPD shall abide by the applicable Grid Code, Grid Connectivity Standards, Metering Regulations, Communication Regulations etc. (as amended from time to time) issued by Appropriate Commission and Central Electricity Authority (CEA) and any other statutory body(ies).

The maintenance of Transmission system (11 kV cable and switchgears) up to the Inter connection Point shall be the responsibility of the SPD.

The arrangement of connectivity can be made by the SPD through a dedicated 11kV cable and 11 KV switch gears at their cost. The entire cost of evacuation of power including cost of laying of cable up to the metering point at the 11 kV panel at the 110 kV substation of CoPA shall be met by the Generator. The meters for the project at the interconnecting point at 11kV panel at 110 kV substation shall be sealed by CoPA.

9 TRANSMISSION CONNECTIVITY WITH KSEBL

The responsibility of getting Transmission (here 11 kV only) Connectivity will lie with the Generator and shall be at the cost of Generator.

All expenses including wheeling charges and losses in relation to the transmission and distribution beyond the Metering Point shall be borne by CoPA as per the regulation notified by the Commission from time to time

Reactive power charges as per CERC/KSERC regulations shall be payable by SPD as per provisions of PPA.

Metering arrangement of project shall have to be adhered to in line with relevant clause of

the PPA.

The Buying Utility (CoPA) will not be responsible for all transmission charges (**CoPA is a distribution licensee and hence there will not be transmission charges for this project**) reactive compensation charges of grid, losses and any other charges as applicable under the respective regulations/ KSERC tariff orders for the 1.5 MWp solar power generation. The above charges shall be payable by the SPD.

10 POWER GENERATION BY SOLAR POWER DEVELOPER

10.1 TECHNICAL SPECIFICATIONS

Procurers shall promote commercially established and operational technologies to minimize the technology risk and to achieve the timely commencement of supply from the Projects. The detailed technical parameters for Solar PV/Energy Storage Systems, shall be as specified by MNRE from time to time.

10.2 DEVIATION FROM PROCESS DEFINED IN Mop's GUIDELINES Dtd 28/07/2023

The objective of the MoP's Guidelines Dtd-28/07/2023 is to bring standardization & uniformity in processes so that there is fairness & transparency in procurement. As such, those Guidelines need to be strictly followed in the bidding process and no bid, under section 63 of the Electricity Act, for procurement of Solar power from the Projects shall be issued in contravention to those Guidelines. However, in case it becomes imperative for the Procurer to deviate from these Guidelines and/or the SBDs, the same shall be subject to approval by the Appropriate Government before the initiation of bidding process itself. Hence the RfS and PPA have been prepared in compliance with MoP's Guidelines Dtd - 28/07/2023.

10.3 Criteria for Generation

The Bidders shall declare the annual CUF (Capacity Utilization Factor) of the Project at the time of submission of response to RfS. The bidders shall ensure that the minimum of 21% CUF is quoted and requested to quote higher CUF upto 28% maximum as per the site conditions CUF shall not be less than 21% as per the KSERC order Dtd -25/04/2023.

Minimum CUF shall be 21% and maximum may be 28% CUF. SPD shall guarantee annual energy generation based on the CUF quoted for 1.5 MWp Floating solar plant. The successful bidder shall be required to meet minimum guaranteed generation with Performance Ratio (PR) at the time of commissioning and related Capacity Utilization Factor (CUF) during the O&M period of 25 years. It shall be the responsibility of the SPD, entirely at its cost and expense to install such number of Solar panels and associated equipment as may be necessary to achieve the required CUF, and for this purpose SPD shall make its own study and investigation of the GHI (Global Horizontal Irradiance) and other factors prevalent in the area which have implication on the quantum of generation. SPD shall maintain generation so as to achieve annual CUF quoted in the till the end of 25 years from COD (Commercial Operation Date). The annual CUF will be calculated every year from 1st April of the year to 31st March next year. The CUF for the period between COD/commencing date upto 1st April (if any) and 31st March upto final closing date (if any) shall be calculated on pro-rata basis.

10.4 Shortfall In Generation

If for any Contract Year, it is found that the SPD has not been able to generate minimum energy corresponding to the value of annual CUF declared in the PPA, on account of reasons solely attributable to the SPD, such shortfall in performance shall make the SPD liable to pay the compensation provided in the PPA (Power Purchase Agreement) to CoPA.

In case the project supplies energy less than the energy corresponding to the minimum CUF, the SPD will be liable to pay to the Procurer, penalty for the shortfall in availability of energy. The amount of such penalty will be equal to one and a half times the PPA tariff for the shortfall in energy terms, in accordance with the terms of the PPA.

In case of shortfall in generation, the SPD shall provide necessary additional panels and arrangements for generating the required capacity as per the PPA. However, this compensation shall not be applicable in events of Force Majeure identified under the PPA, affecting supply of solar power by SPD.

10.5 Excess Generation

In case the energy available is more than the quantum corresponding to maximum CUF specified, the Solar Power Generator will be free to sell it to any other entity provided first right to refusal will vest with the Procurer(s). In case the Procurer purchases the excess generation, the same may be done at the PPA tariff, and provision to this effect shall be clearly indicated in the RfS document.

In order to allow optimization of operation of RE, the Generator is allowed to supply power from the RE power plant in excess of contracted capacity, to any third party or power exchange without requiring any No- Objection Certificate (NOC) from the Procurer. The Generator may also sell the power which was offered on day ahead basis to the Procurer (within Contracted Capacity) but not scheduled by the Procurer, to any third party or in power exchange without requiring NOC from the Procurer.

The scheduling and its punching thereof at different Regional Load Despatch Centres (RLDCs) / State Load Despatch Centres (SLDCs) (including the injecting, intervening and buyer SLDCs/ RLDCs) shall be the responsibility of Generator only.

10.6 Deviation Settlement Mechanism (DSM):

For deviations from schedule, the DSM (Deviation Settlement Mechanism) shall be applicable as per the prevailing regulations. The DSM charges at the generator end shall be settled by the Solar Power Generator

10.7 Generation Compensation for off-take Constraints:

Where the procurer does not schedule power on account of unavailability of the Transmission Infrastructure or any other eventuality, the penalty will be in accordance with the Electricity (Promotion of Generation of Electricity from Must-Run Power Plant) Rules, 2021, as amended from time to time.

10.8 Generation Compensation in off take constraints due to Grid Unavailability:

During the operation of the plant, there can be some periods where the plant can generate power but due to temporary transmission unavailability the power is not evacuated, for reasons not attributable to the Generator. In such cases the generation compensation shall be addressed by the Procurer in following manner.

Duration of Grid unavailability	Provision for Generation Compensation
Grid unavailability beyond 175 hours in a year, as defined in the PPA	<p><i>Generation Compensation =</i> <i>((Tariff X Solar power (MW) offered but not scheduled by Procurer)) X1000 X No. of hours of grid unavailability.</i></p> <p>However, in case of third-party sale or sale in the power exchange, as pricetaker, the 95% of the amount realised, after deducting expenses, shall be adjusted against the Generation compensation payable, on monthly basis.</p>

10.9 Payment in case of reduced off take:

The Generator and the Procurer shall follow the forecasting and scheduling process as per the regulations in this regard by the Appropriate Commission. In case the plant is available to supply power but the off take of power is not done by the Procurer, including non-dispatch of power due to non-compliance with “Electricity (Late Payment Surcharge and Related Matters) Rules, 2022 notified by the Ministry of Power vide Gazette notification dated 3rd June 2022” and any clarifications or amendment thereto, considering the principle of ‘must run’ status for RE Power, the procurer shall pay to the Generator, corresponding to the reduced off take, in terms of following manner:

Reduced Off-take	Provision for Generation Compensation
Reduced off-take beyond 175 hours in a year, as defined in the PPA	<p>Generation Compensation = <i>(Tariff x Solar PV power (MW) offered but not scheduled by Procurer) X 1000 XNo. of hours of Reduced Offtake</i></p> <p>However, in case of third-party sale or sale in the power exchange, as pricetaker, the 95% of the amount realised, after deducting expenses, shall be adjusted against the Generation compensation payable, on monthly basis.</p>

For claiming compensation, the generator must sell their power in the power exchange as a price taker. Thus, the compensation would be limited to the difference of the actual generation up to declared capacity subject to a maximum up to the contracted capacity and the quantum of power scheduled by the procurer.

11 Event of default

- (a) For delay in commencement of supply of power beyond six months from SCSD, the generator event of default shall be construed to have occurred and consequences shall be in accordance with Clause 13.3 of MoP resolution Dtd - 28/07/2023.
- (b) In the event the Generator fails to maintain energy supply corresponding to the minimum CUF as declared in the PPA, the Generator shall be in default and the PPA shall be liable to be terminated. Further, the Generator shall be liable to pay to the

Procurer, damages, equivalent to 24 (twenty-four) months, or balance PPA period whichever is less, of tariff for its contracted capacity with the stipulated minimum CUF.

- (c) In the event that the Generator assigns or novates any of its rights or obligations contrary to the terms of the PPA, or repudiates the PPA, or commits any other acts or omissions as laid down in the PPA and is also unable to cure any of the aforesaid within the cure period, as may be provided in the PPA, the Generator shall pay to the Procurer, damages, equivalent to 24 (twenty four) months, or balance PPA period whichever is less, of tariff for its contracted capacity with the stipulated minimum CUF. The Procurer shall have the right to recover the said damages by way of forfeiture of bank guarantee, if any, without prejudice to resorting to any other legal course or remedy.
- (d) In addition to the levy of damages as aforesaid, in the event of a default by the Generator, the lenders shall be entitled to exercise their rights of substitution, in accordance with the substitution provisions provided in the PPA and in concurrence with the Procurers. However, in the event the lenders are unable to substitute the defaulting Generator within the stipulated period, the Procurer may terminate the PPA.
- (e) If the Procurer/Intermediary procurer is in default on account of reasons including inter alia failure in timely payment of the dues, in accordance with the RfS or repudiation of the PPA, the Generator may terminate the PPA and at its discretion. The defaulting Procurer shall pay to the Generator, damages, equivalent to 24 (twenty-four) months, or balance PPA period whichever is less, of charges for its contracted capacity with the stipulated minimum CUF.

12 CHANGE OF LAW/ REGULATION

The provisions for Change in Law shall be in accordance with the Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021 notified by Ministry of Power vide notification dated 22nd October 2021 including amendments and clarification thereof issued from time to time.

13 INDICATIVE TIME TABLE FOR BID PROCESS

In the bidding process, a minimum period of 22 (twenty-two) days shall be allowed between the issuance of RfS document and the last date of bid submission. The indicative timetable for the bidding process is indicated below:

Sl. No.	EVENT	Elapsed Time from Zero date
1.	Date of issue of Request for Selection (RfS) document, Project specific draft Power Purchase Agreements and other draft Project Agreements, and the Power Sale Agreement (PSA), if applicable.	Zero date
2.	Bid clarification, conferences, opening of online Data Room to share all Project specific details including site, if specified by Procurer etc. & revision of RfS document	**
3.	RfS Bid submission	22 days
4.	Evaluation of technical bids	64 days
5.	Evaluation of financial bids and conduction of e-Reverse Auction	99 days

6.	Issuance of Letter of Award (LoA)	110 days
7.	Signing of PPA & PSA (if applicable)	140 days

*** In case of any change in RfS document, the CoPA shall provide the bidders additional time in accordance with Clause 7 of MoP Guide lines Dtd. 28/07/2023 Guidelines.*

Note: *It is clarified that if the CoPA gives extended time for any of the events in the bidding process, on account of delay in achieving the activities required to be completed before the event, or any other reason, such extension of time shall not in any way be construed as deviation from the Guidelines.*

In normal circumstances, the bidding process is likely to be completed in a period of 110 (one hundred ten) days.

CoPA shall approach the KSERC for adoption of tariffs discovered, in terms of Section 63 of the Act, within 15 (fifteen) days of the discovery of the tariffs through e-reverse auction or otherwise,

If KSERC does not decide upon tariff within 60 (sixty) days of submission of the petition or within 120 (one hundred and twenty) days from the date of LoA whichever is more, CoPA shall grant appropriate extension of time in SCSD to the generators, corresponding to the delay [beyond 60 (sixty)] days of submission or 120 days of LoA, whichever is more in adoption/ approval by the Appropriate Commission, till the date of adoption/ approval by the Appropriate Commission.

14 CLEARANCES REQUIRED FROM THE STATE GOVERNMENT AND OTHER LOCAL BODIES

The Solar Power Developers (SPDs) are required to obtain all the necessary approvals, grid connectivity approval from KSEBL, PPA approval from KSERC, clearances and permits including Environmental Clearance and Connectivity Approval, as required for setting up the Solar Power Projects. All the charges for obtaining such approvals, clearances and permits shall be borne by the SPD only.

The clearances, as applicable for the Project, shall be required to be submitted to CoPA prior to commissioning of the Project. In case of any of the clearances being not applicable for the said Project, the SPD shall submit an undertaking in this regard, and it shall be deemed that the SPD has obtained all the necessary approvals, clearances and permits for establishing and operating the Project. Any consequences contrary to the above shall be the responsibility of the SPD. Any neglect or omission or failure on the part of the bidder in obtaining necessary clearances and reliable information upon the forgoing or any other matter affecting the bid shall not relieve him from any risks or liabilities or the entire responsibility for completion of the work in accordance with the bid.

CoPA shall arrange the connectivity procedures/ Protocol as per technical requirement issued by CEA from time to time. However SPD has to support and provide necessary materials, manpower and shall bear all the expenses in respect to get the connectivity.

15 EARNEST MONEY DEPOSIT (EMD)

All bids must be accompanied by a bid bond (EMD) of an amount equal to 2% of PAC (Estimated Cost). EMD shall be furnished in the form of Account Payee Demand Draft/ Banker's Cheque/ Fixed Deposit Receipt /Bank Guarantee or Payment **on Order instrument** from a Commercial Bank in favour of "FA&CAO, Cochin Port Authority", payable at Cochin or online payment in an acceptable form safeguarding the purchaser's interest in all respects. The exemption shall be granted as per GFR 2017.

"Payment on Order instrument" means Letter of Undertaking from Indian Renewable Energy Development Agency Limited (IREDA) or Power Finance Corporation Limited (PFC) or REC Limited (REC) [the three non-banking financial institutions under Ministry of New & Renewable Energy (MNRE)/Ministry of Power (MoP)], to pay in case situation of default of generator in terms of tender conditions/Power Purchase Agreement (PPA) arises. Such Letter(s) will have same effect as that of a Bank Guarantee issued by any public sector bank. Such "Payment on Order instrument" would have terms and conditions similar to that of any Bank Guarantee given by any public sector bank and would promise to pay the Procurer on demand within stipulated time. Generators can seek such Letters(s) by offering due security to the above mentioned three non-banking financial institutions mentioned above (IREDA, PFC & REC). Procurer(s) shall not accept the instrument of 'Letter of Undertaking' as described above or in any other form, from any other non-banking financial institutions or bank, except IREDA, PFC & REC.

The EMD shall be exempted for MSME Vendors registered under NSIC/ UAM/MSME. In order to avail the exemption in EMD in case of consortium/ JV, all the members should be registered as MSME Vendors under NSIC/ UAM/ MSME Category.

16 PERFORMANCE BANK GUARANTEE (PBG)

Bidders selected by CoPA based on this RfS shall submit Performance Bank Guarantee or Payment on order Instrument for a value @ 5% (five percent) of the Estimated Cost within 21 days of issuance of Letter of Acceptance (LoA) or before signing of PPA, whichever is earlier. It may be noted that successful Bidders shall submit the Performance Bank Guarantee according to the Format 7.3 B for a value @ 5% of the Estimated Cost with a validity period from the date of submission of the PBG until 6 (six) months from the Effective Date of the PPA. On receipt and after successful verification of the Performance Bank Guarantee in the acceptable form, the BG submitted towards EMD shall be returned by CoPA to the successful Bidder. Non-submission of PBG within the above timelines shall be treated as follows:

- a) Delay upto 01 month from due date of submission of PBG: Delay charges @1% of the PBG amount per month levied on per day basis shall be paid by the Bidder to CoPA in addition to the PBG amount.
- b) Delay beyond 01 month from the due date of submission of PBG: The EMD submitted by the Bidder shall be en-cashed by CoPA and the Project shall stand terminated.
- c) For the purpose of calculation of the above delay charges, 'month' shall be considered as a period of 30 days.
- d) The Bidder shall furnish the PBG from any of the Banks listed at Schedule-2 of draft

PPA to CoPA. PBG issued by foreign branch of a bank from bank list given in Schedule- 2 of draft PPA is to be endorsed by the Indian branch of the same bank or State Bank of India (SBI).

- e) The format of the Bank Guarantees prescribed in the Formats 7.3 B (PBG) shall be strictly adhered to and any deviation from the above Formats shall result in rejection of the PBG and consequently, the bid. In case of deviations in the formats of the Bank Guarantees, the corresponding PPA shall not be signed.
- f) The successful Bidders of the Projects selected based on this RfS are required to sign PPA with Cochin Port Authority (CoPA) with provision of separate Escrow account within 01 (One) month after the issuance of LOI. In case, CoPA offers to execute the PPA with the Selected Bidder and if the Selected Bidder does not submit the requisite documents as per Clause No. 14, Section-II, Instructions to Bidders (ITB) or does not meet eligibility criteria upon submission of documents or does not execute the PPA within the stipulated time period, then the Bank Guarantee equivalent to the amount of the EMD shall be forfeited by CoPA from the Bank Guarantee available with CoPA (i.e. EMD or PBG) as liquidated damages not amounting to penalty, the selected Project(s) shall stand cancelled and the selected Bidder expressly waives off its rights and objections, if any, in that respect.
- g) The Bank Guarantees have to be executed on non-judicial stamp paper of appropriate value as per Stamp Act relevant to the place of execution.
- h) All expenditure towards execution of Bank Guarantees such as stamp duty etc. shall be borne by the Bidders.
- i) In addition to the other remedies, this PBG (or alternatives provided thereto as per the MoP's Guidelines) can be encashed to recover any damages/dues of the generator in terms of the PPA. It is hereby clarified that the damages/dues recovered by the Intermediary Procurer by encashing the PBG, upon the default of the generator under the PPA, shall be credited to the Payment Security Fund to be maintained by the Intermediary Procurer under Clause 6.3 of these Guidelines. PBG (or alternatives provided thereto as per these Guidelines) shall be returned to the generator within 45 days of the SCSD of the project. In case of part commencement of supply of power, PBG corresponding to such part capacity, should be released within 45days.
- j) In order to facilitate the Bidders to submit the Bank Guarantee as per the prescribed format and in line with the requirements, checklist at Annexure-B has been attached. Bidders are advised to take note of the above checklist while submitting the Bank Guarantees. After the award of contract to the successful bidder, EMD of the unsuccessful bidders will be released. The EMD of the successful bidder/SPD will be returned to them, immediately after payment of Security Deposit/ PBG as per condition no. 11 above.
- k) Procurer(s) may release the Bank Guarantees submitted by a generator as 'Performance Bank Guarantee (PBG)', if the generator is able to replace the same with "Payment on Order instrument" / Letter(s) of Undertaking to pay in case situation of default of generator in terms of Power Purchase Agreement (PPA) arises, from Indian Renewable Energy Development Agency Limited (IREDA) or Power Finance Corporation Limited

(PFC) or REC Limited (REC).Generators can seek such Letters(s) by offering due security to the above mentioned three nonbanking financial institutions (IREDA, PFC & REC) for seeking replacement of their Bank Guarantees already pledged with the implementing agencies.

17 FORFEITURE OF EMD

The EMD shall be forfeited by COPA in following cases:

- a) If the Bidder withdraws or varies the bid after due date and time of bid submission and during the validity of bid;
- b) In case, COPA offers to execute the PPA with the Selected Bidder and if the Selected Bidder does not submit the requisite documents Section-II, Instructions to Bidders (ITB) of RfS documents or does not execute the PPA within the stipulated time period;
- c) If after issuance of LOI, it is found that the documents furnished by the Bidder as part of response to RfS are misleading or misrepresented in anyway;
- d) If the Bidder fails to furnish required Performance Bank Guarantee Section-II, Instructions to Bidders(ITB) of RfS document.

18 POWER PURCHASE AGREEMENT (PPA)

- a) Cochin Port Authority (COPA) shall enter into Power Purchase Agreement (PPA) with Bidders selected based on this RfS. A copy of standard Power Purchase Agreement (PPA) to be executed between COPA and the successful bidder is enclosed herewith. It is also available on website of COPA www.cochinport.gov.in. www.gem.gov.in www.wprocure.gov.in. The PPA shall be signed within 90 days from the date of issuance of LOI, or within 30 days from date of approval of KSERC.
- b) Note: Any changes in the location of the Project(s) awarded shall not be permitted. The PPAs shall be valid for a period of 25 years from the Scheduled Commencement of -supply Date (SCSD of the Projects).
- c) The Performance Bank Guarantee as per Clause 16 above, shall be submitted by the SPD prior to signing of PPA. Before signing of PPA with the selected Bidder, COPA will verify the documents furnished by the Bidder at the time of submission of response to RfS including the shareholding of the Project Company along with a copy of complete documentary evidence supported with the original documents. Bidders will be required to furnish the documentary evidence for meeting the RfS Qualification Requirement and financial requirements mentioned at Annexure to BDS respectively. At this stage, the Bidders shall be required to furnish the audited balance sheet of the previous month-end along with complete Bank Statement starting from day 1 of submission of response to RfS till date along with a copy of the documents submitted with ROC which became due during this period, along with all the relevant documents filed with MCA for allotment of Shares are required to be submitted at the time of signing of PPA. If at this stage it is found that the documents furnished by the Bidders are false/ misleading or misrepresented in any way then the provisions contained in this RfS will be applicable.
- d) Power Sale Agreements (PSAs) are not applicable for this project.

The SPDs will be free to reconfigure and repower their plants from time to time during the PPA duration. However, CoPA will be obliged to buy power only within the Capacity Utilization Factor (CUF) range laid down in Power Purchase Agreement (PPA) as per guidelines.

19 FINANCIAL CLOSURE OR PROJECT FINANCING ARRANGEMENTS

The SPD shall achieve Financial Closure as early as four months from the date of LOA. At this stage, the SPDs shall report tie-up of Financing Arrangements for the Projects. In this regard, the SPD shall submit a certificate from all financing agencies regarding the tie-up of funds indicated for the Project. Additionally, the SPD shall furnish documentary evidence towards the following:-

- a) The orders placed/agreements entered into, for supply of plants and equipment for the Project.
- b) Detailed Project Report for each Project.
- c) The details of all planned/ proposed Inverters and modules (manufacturer, model number, data sheet, all technical BIS / IEC certificates as mentioned at Annexure- A along with the link of the certifying authority with ILAC member accredited lab/NABL accredited lab) for the Project, at least 15(Fifteen) days prior to the scheduled Financial Closure date.
- d) Copies of all the clearances required for successful execution of the project.
- e) In case of delay in achieving financial closure due to delay not attributable to the SPD, subsequent extension will be given.
- f) The SPD will have to submit the required documents to CoPA at least 15 (Fifteen) days prior to the scheduled Financial Closure date. In case of delay in submission of documents mentioned above, CoPA shall not be liable for delay in verification of documents and subsequent delay in Financial Closure.
- g) In case the SPD submitted all the requisite documents to the concerned authority within 03 (Three) months from the date of execution of PPA and still awaits for clearance by the Statutory authority, then the delay in obtaining the concerned statutory clearance shall not be attributable to the SPD. The SPD need to submit an undertaking stating the reason for delay along with copy of application and the Financial Closure can be done pending that statutory document. However, the SPD needs to submit the pending statutory clearance document prior to commissioning of the project.

20 COMMISSIONING

20.1 The Commissioning of the Projects shall be carried out by the SPDs in line with the procedure elaborated in draft PPA document (Commissioning Procedure at Annexure-A and Appendix-A-1 are for reference). The Chief Mechanical Engineer or his representative shall witness and validate the commissioning procedure at site. Prior to the commissioning and on completion of the project, necessary approval for the solar plant from statutory

body such as CEA/SLDC State electrical inspectorate etc shall be obtained by the SPD at its cost and risk. The Commissioning certificates shall be issued by CoPA after successful commissioning.

20.2 COMMISSIONING SCHEDULE AND LIQUIDATED DAMAGE FOR DELAY IN COMMISSIONING

The Project shall be commissioned within 12 months from the date of signing of PPA. In this regard, the Chief Mechanical Engineer or his representative will physically inspect and certify successful commissioning of the Project. In case of failure to achieve this milestone, provisions of PPA as mentioned below shall apply:-

- a. Delay up to six months from the SCD: The total PBG amount shall be encashed on per day basis and proportionate to the balance capacity not commissioned. For example, in case of a Project of 50MW capacity, if commissioning of 10 MW capacity is delayed by 18 days from the scheduled date, then the penalty shall be: $\text{PBG amount} \times (10/50) \times (18/180)$.
- b. The maximum time period allowed for commissioning of the full Project Capacity with encashment of Performance Bank Guarantee shall be limited to 18 months from the Effective Date of the PPA.

21 DELAY IN COMMENCEMENT OF SUPPLY OF POWER

21.1 Delay in commencement of supply of power, beyond the SCSD shall involve penalties on the generator, as detailed below:

- a. For delay in commencement of supply of power up to 6 (six) months from SCSD, encashment of Performance Bank Guarantee (PBG), or alternate instruments, on per-day basis and proportionate to the contracted capacity that has not commenced supply of power.
- b. For delay in commencement of supply of power beyond six months from SCSD, the following shall be applicable:-
 - (i) The contracted capacity shall stand reduced to the project capacity that has commenced supply of power within the period of SCSD plus 6 (six) months. The PPA for the balance contracted capacity that has not commenced supply of power shall stand terminated.
 - (ii) The Generator shall be debarred from participating in bids issued by any Procurer or any Intermediary Procurer for the following period:
 - a. For one year in case of first default
 - b. For not less than 2 years and not more than 3 years for second and any subsequent defaults.

21.2 Part Commencement of Supply of Power

Part Commencement of Supply of Power of the Project shall be accepted by the Procurer subject to the condition that the Minimum Capacity for acceptance of first and subsequent part(s) shall be 0.75 MW ((with the last part being the balance Contracted Capacity), without prejudice to the imposition of penalty, in terms of the PPA on the part which has not yet commenced supply of power.. However, the SCSD will not get altered due to part-commencement of supply of power. Irrespective of dates of part or full commencement of supply of power, the PPA will remain in force for the period specified in the bid.

For the purpose of calculations for penalty, 'month' shall be considered consisting of 30

days.

Illustration of Liquidated Damages (LD) Calculations:				
Consider the SPD has been selected for the implementation of Project of capacity of 1.5 MW at an estimated cost of ₹ .6,25,50,000.00				
Total Performance Bank Guarantee Amount furnished by the SPD- will be ₹:31.275akh.				
a) LD Conditions:				
<ul style="list-style-type: none"> In case of delay upto 6 Months from Entire PBG amount (i.e. INR 11583.33/MW/Day) shall be encashed as Liquidated Damages for the first six months of delay, calculated on per day basis and proportionate to the capacity not commissioned. 				
b) Consider that the Project commissioning (for e.g. Project capacity 1.5 MW) has been achieved in the following manner:				
Sl. No.	Commissioned Capacity (MW) as on SCD	Capacity remaining Un-commissioned (MW) as on SCD	Date of Commissioning of the respective part	Delay from the Scheduled Commissioning date (days)
1	1	0.5	Scheduled Commissioning date	0
2	0.5	0	Scheduled Commissioning date + 150 Days	150
i) LD Calculation: In case of above commissioning schedule, for 1.0MW capacity commissioned within SCD (scenario 1) there will be no LD. For balance 0.5MW capacity (scenario 2), the LD calculation for encashment of PBG, shall be done as follows:				
Total LD: (0.5 MW X 150days X INR 11583.83) = INR Rs.6,95,000/-				
Based on the above schedule, total LD payable by the SPD shall be INR Rs. 6.95,000/-.				

21.3 Early Commencement of Supply of Power

The Solar Power Generator shall be permitted for commencement of supply of power corresponding to full as well as part contracted capacity, even prior to the SCSD. The developer shall give fifteen (15) days advance notice to CoPA regarding advance commissioning of full or part capacity. CoPA shall give acceptance for availing such power within 15 days from the date of service of notice. In case CoPA do not give its acceptance to purchase power within the stipulated period, the developer can sell the

power to the extent not accepted by CoPA in power exchange or through bilateral agreements as per MoP Guidelines dated 28/07/2023

Provided that in such cases tariff payable by CoPA shall be equal to the PPA tariff

a) Right to Contracted Capacity & Energy / Penalty Clause for not achieving CUF

The CUF for the Project shall remain unchanged for the entire term of the PPA. The declared annual CUF shall in no case be less than 21% or the actual CUF quoted by the bidder. It shall be the responsibility of the SPD, entirely at its cost and expense to install such number of Solar panels and associate equipment (including arrangement of extra Reservoir/land for such installation) as may be necessary to achieve the required CUF, and for this purpose SPD shall make its own study and investigation of the Global Horizontal Irradiance (GHI) and other factors prevalent in the area which have implication on the quantum of generation. SPD shall agree that the methodology specified herein above for calculation of liquidated damages payable by the SPD for shortfall in generation is a genuine and accurate pre-estimation of the actual loss that will be suffered by buying Entity. SPD shall further acknowledge that a breach of any of the obligations contained herein result in injuries and that the amount of the liquidated damages or the method of calculating the liquidated damages specified in this document is a genuine and reasonable pre-estimate of the damages that may be suffered by buying Entity in each case specified under this Agreement. However, this compensation shall not be applicable in events of Force Majeure identified under the PPA with COPA affecting supply of power by the SPD. While the SPD would be free to install DC solar field as per his design of required output, including his requirement of auxiliary consumption, he will not be allowed to sell any excess power to any other entity other than CoPA. In case at any point of time, the peak of capacity reached is higher than the rated capacity and causes disturbance in the system at the point where power is injected, the SPD will have to forego the excess generation and reduce the output to the rated capacity.

In case the project supplies energy less than the energy corresponding to the minimum CUF, the SPG will be liable to pay to the Procurer, penalty for the shortfall in availability of energy. The amount of such penalty will be equal to one and a half times the PPA tariff for the shortfall in energy terms, in accordance with the terms of the PPA.

In the event the Generator fails to maintain energy supply corresponding to the minimum CUF as declared in the PPA, the Generator shall be in default and the PPA shall be liable to be terminated. Further, the Generator shall be liable to pay to the Procurer, damages, equivalent to 24 (twenty-four) months, or balance PPA period whichever is less, of tariff for its contracted capacity with the stipulated minimum CUF.

22 COMMERCIAL OPERATION DATE (COD)

Commercial Operation Date (COD) shall be the date on which the commissioning certificate is issued upon successful commissioning of the full capacity of the Project or the last part capacity of the Project, as the case may be. The 25-year tenure of PPA shall be as per the provisions of PPA. The following milestone dates may therefore be observed and may fall on separate dates:

- (a) Inter connection with Grid: This will be facilitated by the CoPA on the request of the SPD, and on submission of approval certificate from CEA, approval for grid connectivity from KSEBL and upon conducting harmonics tests successfully even if the project is only partially ready, to facilitate testing and allow flow of power generated into the grid to avoid wastage of Power.
- (b) Commissioning of the Project: This will be on a date, when the project meets the criteria defined for project commissioning. CoPA may authorize any individual or committee or organization to declare the project commissioned onsite.

23 MINIMUM PAID UP SHARE CAPITAL TO BE HELD BY PROJECT PROMOTER

The Bidder shall provide 1.5MWp Grid connected Floating Solar PV project at the water body near CoPA's walkway avenue between BOT junction and Kannangatt bridge at Willingdon Island. As per the bidding documents, the SPD shall provide at its cost the required 11kV switchgears, transformers, transmission UG cables (Here 11 kV cables of 3.5 km length from the solar plant to 11 KV panel at 110 kV substation CoPA), metering & Protection devices, SCADA facilities etc. as per standards.

Complete information in their bid in reference to this RfS about the Promoters and upon issuance of Letter of Intent (LoI), the SPD shall indicate its shareholding in the company indicating the controlling share holding before signing of PPA with CoPA.

No change in the controlling share holding of the Bidding Company or Bidding Consortium shall be permitted from the date of submission of response to RfS till the execution of the PPA. However, in case the Project is being set up by a listed Company, this condition will not be applicable.

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

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

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

Any change in the share holding after the expiry of 01 year from COD can be undertaken

under intimation to CoPA. Transfer of controlling share holding of the company developing the project within the same group of companies will however be allowed after COD with the permission of CoPA, subject to the condition that, the management control remains within the same group of companies.

In the event of Change in Shareholding/ Substitution of Promoters triggered by the Financial Institutions leading to signing of fresh PPA with a new entity, an amount of INR 10 Lakh per Transaction as Facilitation Fee (non-refundable) shall be remitted by the developer to COPA.

24 STRUCTURING OF THE BID SELECTION PROCESS

Single stage, two cover bidding has been envisaged under this RfS. Bidders have to submit both Techno-Commercial Bid and Financial Bid (Tariff) together in response to this RfS online. The preparation of bid proposal has to be in the manner described in Clause No.23, Section-II, Instructions to Bidders (ITB) of RfS.

25 INSTRUCTIONS TO BIDDERS FOR STRUCTURING OF BID PROPOSALS IN RESPONSE TO RfS

The bidder including its Parent, Affiliate or Ultimate Parent or any Group Company shall submit a single response to RfS.

Detailed Instructions to be followed by the bidders for online submission of response to RfS are stated at Annexure - D and Annexure - E

Submission of bid proposals by Bidders in response to RfS shall be in the manner described below:

1. Covering Letter as per Format 7.1.
2. In case of a Bidding Consortium, a Power of Attorney in favour of the Lead Member issued by the other Members of the Consortium shall be provided in original as per format attached hereto as Format 7.2.

In the event any Member of the Bidding Consortium (other than Lead Member) is a foreign entity, it may submit Board Resolutions in place of Power of Attorney for the purpose of fulfilling the requirements under this clause. Provided that such Board Resolutions shall be supported by an unqualified opinion issued by the legal counsel of such foreign entity stating that the Board Resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing Company and the authorizations granted therein are true and valid.

3. Earnest Money Deposit (EMD) in DD Drawn in favour of FA&CAO, Cochin Port Authority or as per Clause 15 mentioned above.
4. Board Resolutions, as per prescribed formats enclosed as per Format 7.4 duly certified by the Company Secretary or the Director of the relevant Bidder, as applicable to the Bidder and mentioned hereunder:
 - a. Board resolution from the Bidding Company or the Lead Member of the Consortium, as the case may be, in favour of the person signing the response to RfS and in the event of selection of the Projects and to sign the PPA with COPA. Additionally, Board Resolution from each of the Consortium Members in

- favour of the person signing Consortium Agreement shall also be submitted.
- b. Board Resolution from the Bidding Company committing 100% (One Hundred Percent) of the equity requirement for the Project/Board Resolutions from each of the Consortium Members together in aggregate committing to 100% (One Hundred Percent) of equity requirement for the Project (in case of Bidding Consortium); and
 - c. Board Resolutions from each of the Consortium Members and Lead Member contributing such additional amount over and above the percentage limit (specified for the Lead Member and other member in the Consortium Agreement) to the extent becoming necessary towards the total equity share in the Project Company, obligatory on the part of the Consortium pursuant to the terms and conditions in the Consortium Agreement.
5. In case of a Consortium, the Consortium Agreement between the Members in the Consortium as per Format 7.5 along with Board resolution from each Member of the Consortium for participating in Consortium.
 6. Format for Financial Requirements as per Format 7.6 along with the certificate from practicing Chartered Accountant/Statutory Auditors showing details of computation of the financial credentials of the Bidder.
 7. A disclosure statement as per Format 7.7 regarding participation of any related companies in the bidding process.
 8. Format for Technical Criteria as per Format 7.8 (to be filled out separately for each Project)
 9. Declaration by the Bidding Company/ Lead Member of Bidding Consortium for the Proposed Technology Tie Up as per Format 7.9 (to be filled out separately for each Project).
 10. Pre-contract Integrity Pact as per the format available at CoPA website, www.cochinport.gov.in, in plain white paper.
 11. Experience certificate substantiating the compliance of MQC regarding experience, duly certified by notary Public.
 12. Profile of the company, concurrent commitments etc
 13. Attachments
 - a. Memorandum of Association/ Article of Association needs to be attached along with the bid. The Bidder should also highlight the relevant provision which identifies the objects relating to Power/Energy/Renewable Energy/Solar Power plant development.
 - In case, there is no mention of the above provisions in the MoA/ AoA of the bidding company, the same has to be amended and submitted prior to signing of PPA, if the Bidder is selected as Successful Bidder.
 - If the selected Bidder wishes to execute the project through a Special Purpose Vehicle (SPV), the MoA/ AoA of the SPV highlighting the relevant provision which highlights the objects relating to Power/Energy/Renewable Energy/Solar Power plant development has to be submitted prior to signing of PPA.

- b. Certificate of Incorporation of Bidding Company/ all member companies of Bidding Consortium.
- c. A certificate of shareholding of the bidding company, its Parent and Ultimate Parent (if any) duly certified by a practicing Chartered Accountant/ Company Secretary as on date within one week prior to the last date of bid submission, along with documents containing information about the promoters, and their share holding in the Bidder (as on a date within one week prior to the last date of bid submission) indicating the controlling share holding at the stage of submission of response to RfS as per Section-II, Instructions to Bidders (ITB) of RfS. CoPA reserves the right to seek additional information relating to shareholding in promoter companies, their parents/ ultimate parents and other group companies to satisfy themselves that RfS conditions have been complied with and the Bidder will ensure submission of the same within the required time lines.
- d. Certified copies of annual audited accounts for the last three financial years, i.e. FY 2021-22, 2022-23 and 2023-24.

26 IMPORTANT NOTES AND INSTRUCTIONS TO BIDDERS

1. Wherever information has been sought in specified formats, the Bidders shall fill in the details as per the prescribed format and shall refrain from any deviations and referring to any other document for providing any information required in the prescribed format.
2. The Bidders shall be shortlisted based on the declarations made by them in relevant schedules of RfS. The documents submitted online will be verified before signing of PPA in terms of Section-II, Instructions to Bidders (ITB) of RfS.
3. If the Bidder/ Member in a Bidding Consortium conceal any material information or makes a wrong statement or misrepresents facts or makes a misleading statement in its response to RfS, in any manner what so ever, CoPA reserves the right to reject such response to RfS and/ or cancel the Letter of Award (LoA), if issued, and the Bank Guarantee provided up to that stage shall be encashed. Bidder shall be solely responsible for disqualification based on their declaration in the submission of response to RfS.
4. If the event specified at 21.3 is discovered after the Effective Date of PPA, consequences specified in PPA shall apply.
5. Response submitted by the Bidder shall become the property of the CoPA and CoPA shall have no obligation to return the same to the Bidder. However, the EMDs submitted by unsuccessful Bidders shall be returned as specified in Section-II, Instructions to Bidders (ITB) of RfS.
6. All documents of the response to RfS (including RfS and subsequent Amendments/ Clarifications/ Addenda, PPA and PSA) submitted online must be digitally signed by the person authorized by the Board as per Format 7.4.
7. The response to RfS shall be submitted as mentioned in Clause No. 20, Section-II, Instructions to Bidders (ITB) of RfS. No change or supplemental information to a response to RfS will be accepted after the scheduled date and time of submission of

response to RfS. However, CoPA reserves the right to seek additional information from the Bidders, if found necessary, during the course of evaluation of the response to RfS.

8. The bidder shall make sure that the correct, valid and operative Pass-Phrase to decrypt the relevant Bid-part is submitted in to the 'Time Locked Electronic Key Box (EKB)' after the deadline of Bid submission, and before the commencement of the Online Tender Opening Event (TOE) of Technical bid.
9. All the information should be submitted in English language only. In case of foreign bidders having documents in other than English language, then the documents shall be translated in English language by certified translator and submitted.
10. Bidders shall mention the name of the contact person and complete address and contact details of the Bidder in the covering letter.
11. Response to RfS that are incomplete, which do not substantially meet the requirements prescribed in this RfS, will be liable for rejection by CoPA.
12. Response to RfS not submitted in the specified formats will be liable for rejection by CoPA.
13. Bidders delaying in submission of additional information or clarifications sought will be liable for rejection.
14. Non-submission and/ or submission of incomplete data/ information required under the provisions of RfS shall not be construed as waiver on the part of CoPA of the obligation of the Bidder to furnish the said data/information unless the waiver is in writing.
15. Only Court in Cochin shall have exclusive jurisdiction in all matters.

27 VALIDITY OF THE RESPONSE TO RfS

The Bidder shall submit the response to RfS which shall remain valid up to 120 (One hundred twenty) days from the last date of submission of response to RfS ("Bid Validity"). CoPA reserves the right to reject any response to RfS which does not meet the aforementioned validity requirement.

28 BID PREPARATION COST

The Bidder shall be responsible for all the costs associated with the preparation of the response to RfS and participation in discussions and attending pre-bid meeting(s) etc. CoPA shall not be responsible in any way for such costs, regardless of the conduct or outcome of the bid process

29 CLARIFICATIONS/ PRE BID MEETING/ ENQUIRIES/AMENDMENTS

Clarifications/ Doubts, if any, on RfS document may be emailed and/ or submitted in person/ by post, addressed to the Chief Mechanical Engineer, CoPA on or before the Pre-bid meeting scheduled as per RfS..

CoPA will make effort to respond to the same in the Pre-Bid Meeting to be held as mentioned in the Bid Information Sheet. The replies to the pre-bid clarifications will be uploaded in the website www.gem.gov.in. www.cochinport.gov.in&www.eprocure.gov.in .

No separate reply/ intimation will be sent to the individual bidders. .

A Pre-Bid Meeting shall be held as mentioned in the Bid Information Sheet (Link shall be provided to the firms requesting for the same).

Enquiries/ Clarifications may be sought by the Bid

Name of the Authorized Person of COPA:	Contact Details:
Shri A. Jayasimha Chief Mechanical Engineer, Cochin Port Authority, Cochin 9	Phone (Off): 0484-2666639, 0484-2582300 E-mail: cme@cochinport.gov.in
Sri. D. Ajithkumar Superintending Engineer (Ele)	Phone (Off): 0484-2582320 Email: ajithkumar@ochinport.gov.in

30 RIGHT OF COPA TO REJECT A BID

CoPA reserves the right to reject any or all of the responses to RfS or cancel the RfS or annul the bidding process for any project at any stage without assigning any reasons whatsoever and without thereby any liability.

31 POST AWARD COMPLIANCES

Timely completion of all the milestones i.e. signing of PPA, meeting Financial Closure Requirements/ Conditions Subsequent (PPA), Commissioning etc. will be the sole responsibility of SPD. CoPA shall not be liable for issuing any intimations/reminders to SPDs for timely completion of milestones and/or submission of compliance documents.

Any checklists shared with SPD by CoPA for compliance of above mentioned milestones to be considered for the purpose of facilitation only. Any additional documents required as per the conditions of Guidelines, RfS and PPA shall be timely submitted by the SPD.

32 APPLICABLE LAW

The Contract shall be interpreted in accordance with the laws of India

The disputes if any will be subject to the jurisdiction of the Courts in Cochin.

33 SETTLEMENT OF DISPUTE

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

If the parties fail to resolve, such a dispute or difference by mutual consent, within 45 days of its arising, then the dispute shall be referred by either party by giving notice to

the other party in writing of its intention to refer to arbitration as hereafter provided regarding matter under dispute. No arbitration proceedings will commence unless such notice is given.

33.1 In case the contractor is a public sector enterprise or a Government department/organization

In the event of any dispute or difference relating to the interpretation and application of the provisions of the contract, the parties shall endeavor to resolve all or any dispute arising out or in connection with this MoU amicably by mutual discussions. If the dispute subsists, such dispute or difference shall be taken up by either party for resolution through Administrative Mechanism for resolution of CPSEs Disputes (AMRCD) as mentioned in DPE OM No.05/0003/2019-FTS-10937 dated 14.12.2022 and subsequent amendments thereto. The decision of the AMRCD shall be final and binding on all the parties to the dispute

33.2 In case the contractor is not a public sector enterprise or a government department/organization:

If any dispute of any kind whatsoever arises between CoPA and Successful bidder in connection with or arising out of the contract including without prejudice to the generality of the foregoing, any question regarding the existence, validity or termination, the parties shall seek to resolve any such dispute or difference by mutual discussions/ negotiations.

If the parties fail to resolve, such a dispute or difference by mutual discussions/ negotiations, within 30 days of its arising, then the dispute shall be referred by either party by giving notice to the other party in writing of its intention to refer to arbitration as hereafter provided regarding matter under dispute. No arbitration proceedings will commence unless such notice is given.

In the event of failure of mutual discussions/negotiations the parties together shall appoint a sole arbitrator by mutual consent to resolve the dispute as per the provisions of the Arbitration and Conciliation Act, 1996. The award of the Arbitrator so appointed shall be final and conclusive and binding on all the parties to the Agreement. The fees and expenses of the Arbitrators and all other expenses of the Arbitration shall be equally shared by both the parties. However, the Arbitrator may at his discretion award costs. The Arbitrator may, with the consent of the parties extend the time, from time to time, to make and publish award as the case may be.

Arbitration proceedings shall be conducted with The Arbitration and Conciliation Act, 1996. The venue or arbitration shall be Cochin.

34 FORCE MAJEURE

Notwithstanding the provisions of clauses contained in this RFS document; the contractor shall not be liable to forfeit (a) Security deposit for delay and (b) termination of contract; if he is unable to fulfill his obligation under this contract due to force majeure conditions.

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 and fright embargoes etc. Whether a "Force majeure" situation exists or not, shall be decided by COPA and its decision shall be final and binding on the contractor and all other concerned.

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 months

35 OTHER CONDITIONS

The Successful bidder 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 COPA in writing.

The Successful bidder shall not display the photographs of the work and not take advantage through publicity of the work without written permission of CoPA and KWA.

The Successful bidder shall not make any other use of any of the documents or information of this contract, except for the purposes of performing the contract.

a. Successors and Assignees

In case CoPA or Successful bidder 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.

b. 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.

c. 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 instrument.

36 CONDITIONS FOR BID SUBMISSION BY JV

Companies/Contractors may jointly undertake contract/contracts. Each entity would be jointly and severally responsible for completing the task as per the contract, however declaration of the Lead member to be indicated by bidders, however JV has to designate in their MOU. The firms with at least 26% equity holding each are allowed to jointly meet the legibility criteria.

Bid submitted by an unincorporated Joint Venture of companies (JV) /Consortium of companies (Consortium), shall comply with the following requirements:

- a) There shall be a Joint Venture Agreement between the constituent firms specific for the contract package for which the bids are submitted. The JV Agreement shall include among other things, the joint venture's objectives, the proposed management structures, the

proposed distribution of responsibilities both financial as well as technical for execution of the work, the contribution of each partner to joint venture operation, the commitment of all partners to jointly and severally liable for due performance, recourse/ sanctions within the joint venture in the event of default or withdrawal of any partner and arrangements for providing the required indemnities.

- b) The most experienced partner will be nominated as the Lead Partner and his nomination shall be evidenced by submitting power of attorney signed by the legally authorized signatories of all the partners.
- c) The Lead Partner of the joint venture will provide suitable experienced personnel for at least 3 (three) positions in the assignment during the whole period of contract execution and a statement to this effect should be included in the Joint Venture Agreement.
- d) The bid and in the case of the successful bidder, the Agreement, shall be signed and / or executed in such a manner for making it legally binding on all partners (including operative parts of the ensuing Contract in respect of Agreement of Arbitration, etc.). The Contract shall be signed by legally authorized signatories of all partners.
- e) The Lead Partner shall be authorized to incur liabilities and to receive instructions for and on behalf of the partners of the Joint venture and entire execution of the Contract including payment shall be carried out exclusively through the Lead Partner. A Statement to this effect should be included in the Joint Venture Agreement.
- f) All partners of the Joint Venture shall be liable jointly and severally for the execution of the Contract in accordance with the Contract terms, and a Statement to this effect should be included in the Joint Venture Agreement.
- g) Bid Security as required can be furnished by any partner but it shall be in the name of Joint venture.
- h) Performance Guarantee, as required, will be furnished by all partner(s), out of their accounts, in proportion of their participation in joint venture.
- i) Joint Venture Agreement shall contain a clause to the effect that there shall be a separate JV Bank Account (distinct from the Bank Account of the individual partners) to which the individual partners shall contribute their share capital and/or working capital.
- j) Joint Venture Agreement shall also contain a clause to the effect that the financial obligation of the JV shall be discharged through the said JV Bank Account only and also all payment received by JV from the Employer shall be through that account only.
- k) Participation by a firm in more than one JV /Consortium is not permissible. A firm who submits bid on individual capacity is not eligible to be a partner of a JV /Consortium. In case a firm's name appears in more than one bid then both application may be rejected.
- l) Each partner must submit the complete documentation, or portions applicable thereto, required qualifying the firm for bidding.
- m) All the partners of the JV/Consortium shall be jointly and severally liable for due performance, recourse/sanctions within the joint venture in the event of default of any partner and arrangements for providing the required indemnities.
- n) Notwithstanding demarcation or allotment of work among the partners, each partner shall be liable for non performance of the whole contract irrespective of their demarcation or share of work.
- o) The Lead Partner shall be authorized to act on behalf of the JV/Consortium.
- p) All the correspondences between the Employer and the contractor shall be routed through the Lead Partner.

- q) In the event of default by the Lead Partner, it shall be construed as default of the Contractor; and Employer will take action under relevant clause(s) of the Bid Document and/or General Terms and Conditions of Contract.
- r) A legally binding Joint Venture/Consortium Agreement signed by authorized signatories of all the partners of the JV/Consortium, as per the proforma at *Annexure-13* shall be enclosed with the bid.
- s) In case, the Joint Venture/Consortium Agreement enclosed with the bid is not acceptable to the Employer, the JV /Consortium will modify the agreement so as to be acceptable to the Employer.
- t) Power of attorney duly executed and signed by legally authorized signatories of all the partners, authorizing the Lead Partner (a) to submit bid, negotiate and conclude contract and incur all liabilities therewith on behalf of the partner(s) of the JV /Consortium during the bidding process; and (b) in the event of a successful bid, to incur liabilities and receive instructions for and on behalf of the partner(s) of the JV /Consortium and to carry out the entire execution of the contract including payment, exclusively through Lead Partner, as per the proforma at *Annexure-14*, which shall be duly authenticated by a notary public or equivalent certifying authority, shall be enclosed with the bid.
- u) An undertaking that all the partners are jointly and severally liable to the Employer for the performance of the contract shall be enclosed with the bid.
- v) In the event of any partner leaving the JV, it shall be intimated to the Employer within 30 days by other partner(s). Failure to do so shall be construed as default of the contractor and the Employer may take action under relevant clause(s) of the Bid Document and/or General Terms and Conditions of Contract
- w) The contractor shall not alter its composition or legal status without the prior written permission of the Employer. Failure to do so shall be construed as default of the contractor and the Employer may take action under relevant clause(s) of the Bid Document and/or General Terms and Conditions of Contract.

Number of partners in JV/Consortium shall be limited to maximum of three.

37 PRE CONTRACT INTEGRITY PACT

The bidders have to execute an “Integrity Pact” (IP) as per the format available in CoPA’s website www.cochinport.gov.in., prepared in plain white paper. Integrity pact shall cover entire activities of this tender from bidding stage to the completion of defect liability period during various phases of this tender. The Tenderer should sign and submit the “Integrity Pact” to be executed between the Tenderer and Cochin Port Authority along with the Tender in a separate envelope super scribing “Integrity Pact”. Tenders not accompanied with IP will be rejected. The IP would be implemented through the following panel of Independent External Monitors (IEM) for this tender:

- 1) Shri. M J Joseph, ICAS (Rtd.)
37, Da Costa Square, 3rd Cross, Cooke Town
Bangalore – 560 084
Email: joseph.iem@cochinport.gov.in
- 2) Shri. Punati Sridhar, IFoS(Retd)
8C, Block -4, 14-C Cross,
MCHS Colony, HSR 6th Sector,
Bangalore -560102

Email ID :sridhar.iem@ cochinport.gov.in

For full details of the scheme of IP, you may visit the website of Central Vigilance Commission, New Delhi.

SIGNATURE OF BIDDER

SECTION - III

QUALIFYING REQUIREMENTS FOR BIDDERS (QR)

Short listing of Bidders will be based on meeting the following Criteria:

A GENERAL REQUIREMENTS

1. General

- The Bidder shall be either a Joint Venture (JV)/ Consortium / Private Ltd. Company / Public Ltd. Company / Proprietary Firm.
- A copy of Certificate of Registration / Incorporation, Memorandum of Article of Association, Partnership deed etc. as applicable shall be furnished in support of their claim.
- In case of Bid submitted by JV/Consortium, the minimum eligibility criteria except financial turnover can be fulfilled collectively by the partners of the JV/ Consortium.
- In the case of Bid submitted by JV/Consortium, the Lead partner of the JV shall meet the minimum eligibility criteria of financial turnover.

2. Minimum Qualification Criteria

The tenderers should have the experience of having successfully completed similar works during the last 7 (seven) years ending on the last date of the previous month in which the tender has been floated and should be either of the following:

- a. One (1) similar completed work costing not less than **Rs.5,00,40,000/-** (80% of estimated cost) (or installed 1.20MWp capacity plant) OR
- b. Two (2) similar completed works, each single contract costing not less than **Rs.3,12,75,000/-** (50% of estimated cost) (or installed 0.75 MWp capacity plant)/- OR
- c. Three (3) similar completed works, each single contract costing not less than **Rs.2,50,20,000/-** (40% of estimated cost) (or installed 0.60 MWp capacity plant)

Note:- (i) Similar works means "Site Survey, Design, Engineering, Manufacture, Supply, Storage, Civil work, Erection, Testing & Commissioning of Solar Power Plants in a single contract or cumulative contracts".

(ii) The list of projects commissioned during last 7 years ending **30/04/2024**, indicating whether the project is grid connected, along with a copy of the Commissioning certificate and Work order/ Contract Agreement/ from the Client/Owner shall be submitted in support of the claim.

- (iii) The estimated amount of Rs.6,25,50,000/- has been arrived from the Benchmark cost fixed by KSERC as per the revised Regulations (Renewable and Net metering)(first amendment) Regulations 2022. Since, as per Regulation there is no capacity range available above 500kW, we have considered the capacity range of 101-500kW, which is Rs.4.17 Crore per MW, for calculation of estimate amount.

3. **Financial Eligibility Criteria**

Average Financial turnover of the tenderer during the last 3 financial years ending 31st March 2024, shall not be less than Rs.1,87,65,000/-. The bidder would be required to submit annual audited accounts for the last 3 financial years ending 31/03/2024 ie. FY 2021-22 FY 2022-23 and FY 2023-24, showing annual turnover from the Chartered Accountant. For meeting the above financial eligibility criteria, if the data is provided by the Bidder in USD, equivalent Indian Rupees of Net Worth and other financial parameters will be calculated by the Employer/ CoPA using Reserve Bank of India's reference rates prevailing on the date of closing of the accounts for the respective financial year. For currency other than USD, Bidders shall convert such currency into USD as per the exchange rates certified by their banker prevailing on the relevant date and used for such conversion.

4. The Bid Bond (EMD) shall be remitted as per the Instruction to Bidders (ITB) of SBD.
5. The Chief Mechanical Engineer of Cochin Port Authority reserves the right to reject/ cancel/ postpone /annul any one or all tenders at any stage of the tender, which will be binding on all bidders.
6. All correspondence with regard to the above shall be to the following address. (By Post/e-mail/In Person)
 - a) Name of bid documentation issuance officer :
 - b) Designation of the officer: Chief Mechanical Engineer
 - c) Address: Office of the Chief Mechanical Engineer, 1st floor, Main administrative building, Cochin Port Authority, Cochin 682 009.
 - d) Telephone- 0091 484 2666639, 04842582300, 2582320
 - e) Fax: 0091 484 2666639
 - f) E mail ID- cme@cochinport.gov.in
7. In the case of Bid submitted by JV / Consortium, the lead partner of the JV shall meet the Minimum Eligibility Criteria of Financial Turnover.

SECTION - IV

DEFINITIONS OF TERMS

"ACT" or "ELECTRICITY ACT, 2003" shall mean the Electricity Act, 2003 and include any modifications, amendments and substitution from time to time;

"AFFILIATE" shall mean a Company that, directly or indirectly,

- i. controls, or
- ii. is controlled by, or
- iii. is under common control with, a Company developing a Project or a Member in a Consortium developing the Project and control means ownership, directly or indirectly, of more than 50% (fifty percent) of the voting shares of such Company or right to appoint majority Directors;

"APPROPRIATE COMMISSION" shall mean as defined in the PPA;

"BIDDER" shall mean Bidding Company (including a foreign company) or a Bidding Consortium submitting the Bid. Any reference to the Bidder includes Bidding Company/ Bidding Consortium, Member 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; foreign companies participating in the bidding process shall be registered as companies as per the rules of their country of origin;

"BIDDING CONSORTIUM" or "CONSORTIUM" shall refer to a group of Companies that have collectively submitted the response in accordance with the provisions of this RfS under a Consortium Agreement;

"BLOCK" shall mean a minimum capacity to be installed at a single location, which shall be not be less than 0.75 MW. The Blocks shall be configured in line with Clause 3 of Section-II (ITB) of the RfS;

"CAPACITY UTILIZATION FACTOR (CUF)" shall have the same meaning as provided in CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009 as amended from time to time;

"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.

For Bidders incorporated in countries other than India, "Chartered Accountant" shall mean a person or a firm practicing in the respective country and designated/registered under the corresponding Statutes/ laws of the respective country;

"COMPANY" shall mean a body corporate incorporated in India under the Companies Act, 1956 or the Companies Act, 2013, as applicable;

"COMMERCIAL OPERATION DATE (COD)" shall mean the date as defined in Clause no. 16, Section-II, Instructions to Bidders (ITB) of RfS;

"CONTRACTED CAPACITY" shall mean the A Capacity in MW contracted with CoPA for supply by the SPD to CoPA at the Delivery Point from the Solar Power Project;

“CONTRACT YEAR” shall mean the period beginning from the Effective Date and ending on the immediately succeeding 31st March and thereafter each period of 12 months beginning on 1st April and ending on 31st March provided that:

- (a) in the financial year in which the Scheduled Commissioning Date would occur, the Contract Year shall end on the date immediately before the Scheduled Commissioning Date and a new Contract Year shall commence once again from the Scheduled Commissioning Date and end on the immediately succeeding 31st March, and there after each period of 12(Twelve)Months commencing on 1st April and ending on 31st March, and
- (b) provided further that the last Contract Year of this Agreement shall end on the last day of the Term of this Agreement;

“CONTROL” shall mean the ownership, directly or indirectly, of more than 50% (fifty percent) of the voting shares of such Company or right to appoint majority Directors;

“CONTROLLING SHAREHOLDING” shall mean more than 50% of the voting rights and paid up share capital in the Company/Consortium;

STATE TRANSMISSION UTILITY (STU)” shall mean the State Transmission Utility, M/s Kerala State Electricity Board(KSEBL)

“DAY” shall mean calendar day;

“EFFECTIVE DATE” shall mean the date as on from the date of issuance of Letter of Acceptance Intent (LOA), which shall be indicated in the Power Purchase Agreement(PPA) executed by both the parties;

“EQUITY” shall mean Net Worth as defined in Companies Act,2013;

“FINANCIAL CLOSURE” or “PROJECT FINANCING ARRANGEMENTS” means arrangement of necessary funds by the Solar Power Developer either by way of commitment of funds by the Company from its internal resource and/or tie up of funds through a bank/ financial institution by way of sanction of a loan or letter agreeing to finance. For details kindly refer Clause no. 14, Section-II(ITB);

“FLOATING SOLAR” means a floating solar array or floating solar farm, refers to an array of photovoltaic panels on a structure that floats on a body of water, typically a reservoir or lake;

‘Intermediary Procurer’ & ‘End Procurer’

(i). In some cases, an intermediary, as designated by Ministry of New and Renewable Energy, Government of India, or a State Government, may be tasked to aggregate the power purchased from different Solar Power

Generators and sell it to the distribution licensee(s)/consuming entities/open access consumers. In such cases, the distribution licensees/consuming entities/open access consumers shall be the “End Procurer” and the intermediary shall be “Intermediary Procurer” for the purpose of these Guidelines.

(ii). The Intermediary Procurer shall enter into a Power Purchase Agreement (PPA) with the Solar Power Generator and also enter into a Power Sale Agreement (PSA) with the End Procurer. The PSA shall contain the relevant provisions of the PPA on a back-to-back basis. Trading margin, of Rs. 0.07/kWh shall be payable by the End Procurer to the Intermediary Procurer.

(iii). As long as the Intermediary Procurer has followed these Guidelines for procurement of power, the End

Procurer shall be deemed to have followed these Guidelines for procurement of power.

“LEAD MEMBER OF THE BIDDING CONSORTIUM” or “LEAD MEMBER”: There shall be only one Lead Member, having the shareholding of not less 51% in the Bidding Consortium.

“GROUP COMPANY” of a Company means

- a) a Company which, directly or indirectly, holds 10% (Ten Percent) or more of the share capital of the Company or;
- b) a Company in which the Company, directly or indirectly, holds 10% (Ten Percent) or more of the share capital of such Company or;
- c) a Company in which the Company, directly or indirectly, has the power to direct or cause to be directed the management and policies of such Company whether through the ownership of securities or agreement or any other arrangement or otherwise or;
- d) a Company which, directly or indirectly, has the power to direct or cause to be directed the management and policies of the Company whether through the ownership of securities or agreement or any other arrangement or otherwise or;
- e) a Company which is under common control with the Company, and control means ownership by one Company of at least 10% (Ten Percent) of the share capital of the other Company or power to direct or cause to be directed the management and policies of such Company whether through the ownership of securities or agreement or any other arrangement or otherwise;
- f) Provided that a financial institution, scheduled bank, foreign institutional investor, Non-Banking Financial Company, and any mutual fund shall not be deemed to be Group Company, and its shareholding and the power to direct or cause to be directed the management and policies of a Company shall not be considered for the purposes of this definition unless it is the Project Company or a Member of the Consortium developing the Project;

“INTER-CONNECTION POINT/DELIVERY/METERING POINT” shall mean the point at 11kV at the 110KV substation, where the power from the Solar Power Projects is injected in to the identified termination point (including the dedicated transmission line (here 11 kV line U.G cable) connecting the solar power Projects with the substation systems such as UG cables, switch gears, metering panels etc) as specified in the RfS document. Metering shall be done at this interconnection point where the power is injected into. For interconnection with grid and metering, the SPDs shall abide by the relevant CERC/ SERC Regulations, SLDC rules, Grid Code, CEA Communication & Cyber Security Regulations and Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended and revised from time to time.

“JOINT CONTROL” shall mean a situation where a company has multiple promoters (but none of the shareholders has more than 50% of voting rights and paid up share capital);

Note: The share holding of the Lead member in the Project Company (Special Purpose Vehicle) cannot be changed till 01 (One) year after the Commercial Operation Date (COD) of the Project;

“LETTER OF AWARD” or “LoA” shall mean the letter issued by Cochin Port

Authority(CoPA) to the selected Bidder for award of the Project;

"LIMITED LIABILITY PARTNERSHIP" or "LLP" shall mean a Company governed by Limited Liability Partnership Act 2008 or as amended;

"LLC" shall mean Limited Liability Company;

"MEMBER IN A BIDDING CONSORTIUM" or "MEMBER" shall mean each Company in a Bidding Consortium. In case of a Technology Partner being a member in the Consortium, it has to be a Company;

"MONTH" shall mean calendar month;

"NET-WORTH" means the Net-Worth as defined section 2 of the company Act,2013;

"PAID-UP SHARE CAPITAL" shall mean the paid-up share capital as defined in Section 2 of the Company Act,2013;

"PARENT" shall mean a Company, which holds not more than 50% voting rights and paid up share capital, either directly or indirectly in the Project Company or a Member in a Consortium developing the Project;

"PGCIL" means Power Grid Corporation of India Limited;

"PPA" shall mean the Power Purchase Agreement signed between the SPD and CoPA with provision of separate Escrow account according to the terms and conditions of the standard PPA enclosed with this RfS;

"PACKAGE" shall mean cumulative installation of 1.50 MW, to be interconnected at a single point. A Project may be divided into 02 Packages by the Bidder and shall be configured in line with Clause 3 of Section-II(ITB)of the RfS;

"POWER PROJECT" or "FLOATING SOLAR POWER PROJECT" or "PROJECT" shall mean the solar power generation facility having separate points of injection in to the grid at Inter-connection/Delivery/Metering Point, as illustrated in Clause no. 3 of Section II (ITB) of the RfS, a Project may comprise of 2packages each of 0.75MWp with separate meters. However the injection point to the grid is a single point where power from 2 sources shall be synchronized to a single unit and connected to CoPA's grid through a common grid meter and CT/PT units. The payment shall be made based on the energy shown in the common grid meter. The Project and/ or Package(s) shall include all units and auxiliaries such as water supply, treatment or storage facilities, bay(s) for transmission system in the switchyard, dedicated transmission line up to the Delivery Point and all the other assets, buildings/structures, equipment, plant and machinery, facilities and related assets required for the efficient and economic operation of the power generation facility, whether completed or at any stage of development and construction or intended to be developed and constructed or the purpose of supply of power to CoPA;

'Procurer': The term 'Procurer', as the context may require, shall mean the distribution licensees, or the Authorized Representative(s), or an Intermediary Procurer.

"PROJECT CAPACITY" shall mean the maximum A Capacity at the delivery point that can be scheduled on which the Power Purchase Agreement shall be signed;

"PROJECT COMMISSIONING": The Project will be considered as commissioned if all equipment as per rated project capacity has been installed and energy has flown into grid, in line with the Commissioning procedures defined in the RfS /PPA;

“PROJECT DEVELOPER” or “DEVELOPER” or “SOLAR POWER DEVELOPER (SPD)” shall mean the Bidding Company or a Bidding Consortium participating in the bid and having been selected and allocated a project capacity by CoPA (through a competitive bidding process), including the SPV formed by the selected bidder/ consortium for the purpose of setting up of project and signing of PPA with CoPA;

“RfS DOCUMENT” shall mean the bidding document issued by CoPA including all attachments, clarifications and amendments thereof vide RfSNo.GEM/B/... M dt:00/00/2023.

“COPA” shall mean **Cochin Port Authority**;

“SCHEDULED COMMENCEMENT OF SUPPLY DATE(SCSD) ” : Scheduled Commencement-of-Supply Date (SCSD) in relation to the contracted capacity shall mean the date corresponding to the date of commencement of supply as indicated in the RfS (Request for Selection).

“SELECTED BIDDER” or “SUCCESSFUL BIDDER” shall mean the Bidder selected pursuant to this RfS to set up the Project and supply electrical output as per the terms of PPA;

SOLAR POWER GENERATOR (SPG)

The term Solar Power Generator ‘(SPG) or Generator’, wherever used in these Guidelines, shall refer to a generator and supplier of Solar Power with or without energy storage system.

“SOLAR PV PROJECT” shall mean the Solar Photo Voltaic Power Project that uses sunlight for direct conversion in to electricity through Photo Voltaic Technology;

“STATE TRANSMISSION UTILITY” or “ STU” shall mean the Kerala State Electricity Board or the Government Company notified by the respective State Government under Sub-Section I of Section 39 of the Electricity Act,2003;

“TOE” shall mean Tender Opening Event.

“ULTIMATE PARENT” shall mean a Company, which owns more than 50% (Fifty Percent)votingrightsandpaidupsharecapital,eitherdirectlyorindirectlyintheParent and Affiliates;

“KSEBL” shall mean Kerala State Electricity Board Limited;

“CERC” Means Central Electricity Regulatory Commission

“KSERC” Means Kerala State Electricity Regulatory Commission

“WEEK” shall mean calendar week;

SECTION - V

BID EVALUATION AND SELECTION OF PROJECTS

1 BID EVALUATION

Bid evaluation will be carried out considering the information furnished by Bidders as per provisions specified in Section-II, Instructions to Bidders (ITB) of this RfS.

The evaluation process comprises the following four steps:

Step I - Responsiveness check of Techno Commercial Bid

Step II -Evaluation of Bidder's fulfillment of Eligibility Criteria

Step III --Evaluation of Technical Bid based on the tariff quoted by the L1 bidder and if more than one bidder quote L1 tariff then weight age will be given to CUF (Capacity Utilization Factor) quoted by the Bidder.

Step IV -Successful Bidders(s) selection

The detailed evaluation procedure and selection of bidders are described in subsequent clauses in this Section.

2 TECHNO-COMMERCIAL EVALUATION OF BIDDERS

Each Bid shall be checked for compliance with the submission requirements set forth in this RfS before the evaluation of Bidder's fulfillment of Eligibility Criteria is taken up. During the examination of the bids, CoPA may seek clarifications/shortfall documents from the Bidders if required to satisfy themselves for meeting the eligibility conditions by the Bidders. Bidders shall be required to respond to any clarifications/ additional documents sought by CoPA within 07 (Seven) Days from the date of such intimation from CoPA. All correspondences in this regard shall be made through the mail only. The bidders shall send replies to the clarifications by mail attaching the documents as requested within the time given for replies.

3 RESPONSIVENESS CHECK OF TECHNO COMMERCIAL BID

Clarification of Bids: The Chief Mechanical Engineer shall ask for clarification / shortfall of documents before technical evaluation of the tenders. The request for clarification and the response shall be in writing, but no change in the price or substance of the Bid shall be sought, offered, or permitted. Any effort by the Bidder to influence the Employer's bid evaluation, bid comparison or contract award decisions, may result in the rejection of his bid.

4 EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS:

4.1 Prior to the Technical evaluation of Bids, Cochin Port Authority will determine whether each Bid (a) meets the Minimum Qualification criteria as defined in Clause No. 2 of Section III above 'Qualifying requirements for Bidders' (QR) has been substantially responsive to the Tender requirements.

4.2 A responsive bid is one which conforms to all the terms, conditions and specification

of the bidding documents, without material deviation or reservation. A material deviation or reservation is one which affects in any substantial way the scope, quality or performance of the works (a) which limits in any substantial way, the Employer's rights or the Bidder's obligations under the Contract. (b) whose rectification would affect unfairly the competitive position of other Bidders presenting responsive bids.

4.3 If a Bid is not substantially responsive, it shall be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

5 Evaluation and Comparison of Bids:

Only those tenders, as determined to be substantially responsive to the requirements of the tender documents will be evaluated. Other non-responsive tenders will be rejected. Employer's decision on this shall be final, conclusive and binding. The tenderers shall quote the total cost / levelized tariff including GST, in the Price Bid / BoQ in the GeM Portal.

6. Award of Contract:

The Employer will award the Contract to the bidder whose bid has been determined to be responsive to the bidding documents and quotes L1 tariff with minimum 21 % CUF. If more than one bidder quote L1 tariff then weightage will be given to CUF (Capacity Utilization Factor) quoted by the Bidder.

The CoPA reserves the right to conduct the Reverse auction among the Pre-qualified bidders whose financial bids have been opened in order to explore the possibility of determining lowest tariff, if required.

a. Bidder shall be given weightage for CUF if more than one bidder quote L1 tariff

- (1) Bids that are incomplete, i.e. not accompanied by the Prequalification documents like Previous Work orders, Completion/Performance certificates and Financial Turn over certificates.
- (2) Bid not signed by authorized signatory and /or stamped in the manner indicated in this RFS;
- (3) Material inconsistencies in the information /documents submitted by the Bidder, affecting the Eligibility Criteria;
- (4) Information not submitted in the formats specified in this RFS;
- (5) Bid being conditional in nature;
- (6) Bid having Conflict of Interest;
- (7) More than one Member of a Bidding Company using the credentials of the same Parent Company /Affiliate;
- (8) Bidder delaying in submission of additional information or clarifications sought by CoPA, as applicable;
- (9) Bidder makes any misrepresentation.

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

A. Evaluation of Bidder's fulfillment of eligibility criteria

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 Section III Eligibility Criteria

B. EVALUATION OF PRICE BID

The Price Bid of only the Qualified Bidders shall be opened in the GeM portal, on a date as may be intimated by CoPA to the Bidders through e-mail. The evaluation of Price Bid shall be carried out based on the information furnished in the BoQ. The Price bids shall be evaluated as follows:

- a. The lowest tariff among the competitive bidders
- b. The CoPA reserves the right to conduct the Reverse auction among the Pre-qualified bidders whose financial bids have been opened in order to explore the possibility of determining lowest tariff.

C. REVERSE AUCTION

CoPA shall conduct the Reverse Auction among the pre-qualified and the bidders whose financial bids are opened. The reverse auction will be conducted in the following situations.

In the case of the tariff, determined through tender process, is to be reduced/ revised as per KSERC's approval/ directions.

At least one week prior to reverse auction, an advance intimation regarding the date and time of the reverse auction will be informed to the Bidders among the Pre-qualified bidders whose financial bids have been opened.

Prior to the start of the Reverse auction, the lowest tariff of the Bidder will be displayed in the GeM Portal which will be the Starting bid price.

The minimum decrement value for tariff will be informed to the bidders while at the time of information of Reverse auction.

Bidders can only quote any value lower than the Starting bid price declared by the COPA.

During reverse auction, the Bidder shall not have the option to change the Scope or Capacity or any of the parameters contained in the Original Tender.

In the Bidder's bidding window, the following information can be viewed by the Bidder:

- a. The start price of the Bid.
 - b. The list of all the Bidders with their following details: Pseudo Identity, last quoted tariff and project capacity
- D. The initial auction period will be of 01 (One) Hour with a provision of auto extension by eight Minutes from the scheduled/ extended period will be allowed by the system, this extension of eight minutes will be automatically given till such time when there is no bids during the eight minutes period and after which the Reverse auction will be closed and no further bids will be accepted.

E. INDICATIVE TIME TABLE FOR BID PROCESS

In the bidding process, a minimum period of 22 (twenty-two) days shall be allowed between the issuance of RfS document and the last date of bid submission. The indicative time table for the bidding process is as per Clause No. 9.1 of MoP Guide Line Dt: 28/07/2023.

*** In case of any change in RfS document, the Procurer shall provide the bidders additional time in accordance with Clause 7.5 of MoP's Guideline Dtd 28/07/2023..*

If the Procurer gives extended time for any of the events in the bidding process, on account of delay in achieving the activities required to be completed before the event, or any other reason, such extension of time shall not in any way be construed as deviation from the Guidelines of MoP

In normal circumstances, the bidding process is likely to be completed in a period of 110 (one hundred ten) days.

SECTION - VI

OTHER PROVISIONS

1 ROLE OF STATE NODAL AGENCIES

It is envisaged that the CoPA shall arrange project implementation team, with project coordinator who will provide necessary support to facilitate the required approvals and sanctions in a time bound manner so as to achieve commissioning of the Projects within the scheduled Time line. This may include facilitation in the following areas:

- Coordination among various State and Central agencies for speedy implementation of projects
- Support during commissioning of projects and issue of commissioning certificates.
- The cost involved for getting approvals, statutory clearance etc shall be borne by the SPD

2 INTELLECTUAL PROPERTY/ COPYRIGHT AND PATENT

- i) The copyright in all drawings, documents and other materials containing data and information furnished to the Employer by the Contractor here in shall remain vested in the Contractor or, if they are furnished to the Employer directly or through the Contractor by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party. The Employer shall however be free to reproduce all drawings, documents, specification and other material furnished to the Employer for the purpose of the contract including, if required, for operation and maintenance of the facilities.
- ii) The Contractor shall indemnify the Employer against third party claims of infringement of patent, trademark or industrial design rights arising from use of goods or any part thereof in India.
- iii) Any IPR related issue should be taken care by the SPD. COPA will not be responsible.
- iv) The technology to be used for PV Modules, anchoring etc., shall be the latest in the market and got approved from the Engineer in charge of the Project.

SECTION - VII
SAMPLE FORMS & FORMATS
FOR BID SUBMISSION

FORMATS FOR BID SUBMISSION

The following formats are required to be submitted as part of the RfS. These formats are designed to demonstrate the Bidder's compliance with the Qualification Requirements set forth in Section - III and other submission requirements specified in the RfS.

- 1) Format of Covering Letter (Format 7.1)
- 2) Format for Power of Attorney (Format 7.2)
- 3) Details of past experience of contractors for similar works (Format 7.14)
- 4) Details of proposed approach and methodology (Format 7.17)
- 5) Technical Requirements for Grid Connected Solar PV Projects (Annexure-A)
- 6) Integrity pact (Annexure F as per CoPA format available in the website)

COVERING LETTER

**(The Covering Letter should be submitted on the Letter Head of the Bidding Company/
Lead Member of Consortium)**

Ref.No.

Date:

From:(Insert name and address of Bidding Company/Lead Member of Consortium)

Tel.#:

Fax#:

E-mail address#

To

The Chief Mechanical Engineer

Cochin Port Authority

Sub: Response to RfS No. -----for Selection of Solar Power Developers for Setting up
of 1.5 MW Grid Connected Floating Solar Power Projects at Backwaters of Cochin
Port Authority.

Dear Sir/ Madam,

We, the undersigned.....[insert name of the ' Bidder'] having read, examined and understood in detail the RfS including Qualification Requirements in particular, terms and conditions of the standard PPA for supply of power for 25 years to CoPA, here by submit our response to RfS.

We confirm that in response to the aforesaid RfS, neither we nor any of our Ultimate Parent Company/ Parent Company/ Affiliate/ Group Company has submitted response to RfS other than this response to RfS, directly or indirectly, in response to the aforesaid RfS (as mentioned in Format 7.7 under Disclosure). We also confirm that we including our Ultimate Parent Company/ Parent Company/ Affiliate/ Group Companies directly or indirectly have not submitted response to RfS for more than cumulative capacity of 1.5 MW, including this response toRfS.

We are submitting RfS for the development of following Solar PV Project(s): -

Project No.	Capacity (MW)	Location of Project	Interconnection Point Details	Proposed CUF	Project Preference*

*The preferences of the Projects shall be considered only for the last successful bidder whose total quoted capacity is more than the balance capacity. In this case, allocation will be done as described in Section V of the RfS.

(Note: The Bidder must ensure the project capacity mentioned should be more than or equal to 0.75 MW and less than or equal to 1.5 MW for each project. Delete/Insert rows as applicable)

- 1..... We give our unconditional acceptance to the RfS, dated [Insert date in dd/mm/yyyy], standard PPA documents attached there to, issued by COPA. In token of our acceptance to the RfS, PPA documents along with the amendments and clarifications issued by COPA, the same have been digitally signed by us and enclosed with the response to RfS. We shall ensure that the PPA is executed as per the provisions of the RfS and provisions of PPA and shall be binding on us. Further, we confirm that the Project shall be commissioned within 06 months of the Effective Date of PPA.
2. Earnest Money Deposit (EMD): - (Please read Section-II, ITB carefully before filling)
We have enclosed EMD of INR (Insert Amount), in the form of Bank Guarantee no..... [Insert bank guarantee number] dated [Insert date of bank guarantee] as per Format 7.3A from[Insert name of bank providing bank guarantee] and valid up toin terms of, Section-II,ITB of this RfS. The total capacity of the Solar PV Project offered by us is MW [Insert cumulative capacity proposed].
3. We hereby declare that in the event our Project(s) get selected and we are not able to submit Bank Guarantee of the requisite value(s) towards PBG within due time as mentioned in, Section-II,ITB of this RfS on issue of LoA by CoPA for the selected Projects and/ or we are not able to sign PPA within the prescribed timelines with CoPA for the selected Projects, CoPA shall have the right to encash the EMD submitted by us and return the balance amount (if any) for the value of EMD pertaining to unsuccessful capacity.
4. We have submitted our response to RfS strictly as per Section-VII (Sample Forms and Formats) of this RfS, without any deviations, conditions and without mentioning any assumptions or notes in the said Formats.

5. We hereby declare that during the selection process, in the event our bid happens to be the last bid in the list of successful bids and COPA offers a capacity which is less than our quoted capacity due to overall bid capacity limit, we shall accept such offered capacity.
6. Acceptance:
We hereby unconditionally and irrevocably agree and accept that the decision made by CoPA in respect of any matter regarding or arising out of the RfS shall be binding on us. We hereby expressly waive and withdraw any deviation and claims in respect of this process.
7. 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 response to RfS and execute the PPA, in the event of our selection as Successful Bidder.
8. In case of our selection as the Successful bidder under the scheme and the project being executed by a Special Purpose Vehicle (SPV) incorporated by us which shall be our 100% subsidiary, we shall infuse necessary equity to the requirements of RfS. Further we will submit a Board Resolution prior to signing of PPA with CoPA, committing total equity infusion in the SPV as per the provisions of RfS.
9. We hereby undertake that in the event of our project being selected under the RfS, we shall be solely responsible for getting the connectivity prior to commissioning of the Project. In the event of delay in commissioning with the grid beyond 06 months, the provisions of the RfS/ relevant articles of PPA shall be applied on such projects. Further, the project shall not be considered as commissioned unless the connectivity with grid is established.
10. We are submitting our response to the RfS with formats duly signed as desired by you in the RfS online for your consideration.
11. It is confirmed that our response to the RfS is consistent with all the requirements of submission as stated in the RfS, including all clarifications and amendments and subsequent communications from COPA.
12. The information submitted in our response to the RfS is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our response to the RfS.
13. We confirm that all the terms and conditions of our Bid are valid upto -----(Insert date in dd/mm/yyyy) for acceptance [i.e. a period of 240 (Two Hundred Forty) Days from the last date of submission of response to RfS].
14. Contact Person
Details of the representative to be contacted by COPA are furnished as under:
Name :
Designation :
Company :
Address :

Phone Nos. :
Mobile Nos. :
Fax Nos. :
E-mail address :

15. We have neither made any statement nor provided any information in this Bid, which to the best of our knowledge is materially inaccurate or misleading. Further, all the confirmations, declarations and representations made in our Bid are true and accurate. In case this is found to be incorrect after our selection as Successful Bidder, we agree that the same would be treated as a Seller's event of default under PPA and consequent provisions of PPA shall apply.

Dated the day of , 2024

Thanking you,
We remain,
Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

PROFORMA OF POWER- OF-ATTORNEY/LETTER OF AUTHORITY

(To be submitted on Non-judicial Stamp Paper of appropriate value)

To

The Chief Mechanical Engineer,
Cochin Port Authority,
Cochin 682009.
Kerala, India.

Dear Sir,

We _____
do hereby confirm that Mr./Ms./Messrs _____ [INSERT
NAME AND ADDRESS], whose signature is given below, is /are authorized to
represent us to bid, negotiate and conclude the agreement on our behalf with you
against Tender for "-----"

(Tender No.....).

We confirm that we shall be bound by all and whatsoever our said agents shall commit.

Signature of the authorized person :

Name & Designation :

Yours faithfully,

Signature, name and seal of the certifying authority

FORMAT FOR POWER OF ATTORNEY
(Applicable Only in case of Consortiums)

(To be provided by each of the other members of the Consortium in favor of the Lead Member)

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

KNOW ALL MEN BY THESE PRESENTS THAT M/s..... having its registered office at,,and M/s..... having its registered office at, (Insert names and registered offices of all Members of the Consortium) the Members of Consortium have formed a Bidding Consortium named (insert name of the Consortium if finalized) (hereinafter called the 'Consortium') vide Consortium Agreement dated..... and having agreed to appoint M/s..... as the Lead Member of the said Consortium do hereby constitute, nominate and appoint M/s..... a company incorporated under the laws ofand having its Registered/ Head Office atas our duly constituted lawful Attorney (hereinafter called as Lead Member) to exercise all or any of the powers for and on behalf of the Consortium in regard to submission of the response to RfS No.....

We also authorize the said Lead Member to undertake the following acts:

- i) To submit on behalf of Consortium Members response to RfS.
- ii) To do any other act or submit any information and document related to the above response to RfS Bid.

It is expressly understood that in the event of the Consortium being selected as Successful Bidder, this Power of Attorney shall remain valid, binding and irrevocable until the Bidding Consortium achieves execution of PPA.

We as the Member of the Consortium agree and undertake to ratify and confirm all whatsoever the said Attorney/ Lead Member has done on behalf of the Consortium Members pursuant to this Power of Attorney and the same shall bind us and deemed to have been done by us.

IN WITNESS WHEREOF M/s....., as the Member of the Consortium have executed these presents on this..... day of under the Common Seal of our company.

For and on behalf of Consortium Member

M/s.....

----- (Signature of person authorized by the board) (Name
Designation Place: Date:)

Accepted

(Signature, Name, Designation and Address
of the person authorized by the board of the Lead Member)

Attested

(Signature of the executants)

(Signature & stamp of Notary of the place of execution)

Place:

Date:

Lead Member in the Consortium shall have the controlling shareholding in the Company as defined in Section-IV, Definition of Terms of the RfS.

FORMAT FOR EARNEST MONEY DEPOSIT (EMD)

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

Reference:

Bank Guarantee No.:.....

Date:

In consideration of the ---- [Insert name of the Bidder] (hereinafter referred to as 'Bidder') submitting the response to RfS interalia for selection of the Project/ Projects of the cumulative capacity of -----MW [Insert cumulative Project capacity proposed] for supply of power there from on long term basis, in response to the RfS No. dated issued by Cochin Port Authority (hereinafter referred to as CoPA) and CoPA considering such response to the RfS of [insert the name of the Bidder as per the terms of the RfS, the [insert name & address of bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to CoPA at [Insert Name of the Place from the address of CoPA] forthwith on demand in writing from CoPA or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees [Insert amount not less than that derived on the basis of 1 to 5% of the estimate value]__only, on behalf of M/s..... [Insert name of the Bidder].

This guarantee shall be valid and binding on this Bank upto and including ----- [insert date of validity in accordance with Clause No.--, Section-II, ITB of this RfS] and shall not be terminable by notice or any change in the constitution of the Bank or the term of contractor by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to INR.....(Indian Rupeesonly). Our Guarantee shall remain in force until.... [insert date of validity in accordance with Clause No. --, Section-II, ITB of this RfS]. CoPA shall be entitled to invoke this Guarantee till[insert date of validity in accordance with Clause No.--, Section-II, ITB of this RfS].

The Guarantor Bank hereby agrees and acknowledges that the CoPA shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by CoPA, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to CoPA.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by [Insert name of the Bidder] and/or any other person. The Guarantor or Bank shall not require CoPA to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against CoPA in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at New Delhi shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

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

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

The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to CoPA and may be assigned, in whole or in part, (whether absolutely or by way of security) by CoPA to any entity to whom CoPA is entitled to assign its rights and obligations under the PPA.

Notwithstanding anything contained herein above, our liability under this Guarantee is restricted to INR ----- (Indian Rupees Only) and it shall remain in force until [Date to be inserted on the basis of Clause No. --, Section-II, ITB of this RfS].

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

Signature:

Name:

Power of Attorney No.:

For

[Insert Name and Address of the Bank]

Contact Details of the Bank: E-mail ID of the Bank:

Banker's Stamp and Full Address. Dated this _ day of _ ,20

PROFORMA OF IRREVOCABLE BANK GUARANTEE FOR PERFORMANCE GUARANTEE

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

In consideration of the ----- [Insert name of the Bidder] (hereinafter referred to as selected Successful Bidder(SB)) submitting the response to RfS for the capacity of MW under Floating solar PV Project in response to the RfS No _____ dated..... issued by Cochin Port Authority (hereinafter referred to as CoPA) and COPA considering such response to the RfS of[insert the name of the Successful Bidder] (which expression shall unless repugnant to the context or meaning thereof include its executors, administrators, successors and assignees) and selecting the Solar Power Project of the Solar Power Developer and issuing Letter of allocation No ----- to----- (insert the name of the Successful Bidder(SB)) as per terms of RfS and the same having been accepted by the selected SB or a Project Company, M/s ----- {a Special Purpose Vehicle (SPV) formed for this purpose}, if applicable]. As per the terms of the RfS, the.....[insert name & address of bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to COPA at_____ [Insert Name of the Place from the address] of the COPA forthwith on demand in writing from COPA or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees [Total Value] only, on behalf of M/s.....Bidder(SB)/ Project Company] [Insert name of the selected Successful bidder

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

Our liability under this Guarantee is restricted to Rs. (Rs. only) Our Guarantee shall remain in force until[insert date of validity) COPA shall be entitled to invoke this Guarantee till[Insert date which is 30 days after the date in the preceding sentence].

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand Cochin Port Authority, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to Cochin Port Authority.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by -----[Insert name of the Successful Bidder(SB)/ Project Company as applicable] and/or any other person. The Guarantor Bank shall not require COPA to justify the invocation of this BANKGUARANTEE, nor shall the Guarantor Bank have any recourse against COPA in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at Ernakulam shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

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

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly COPA shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Successful Bidder(SB) / Project Company , to make any claim against or any demand on the Successful Bidder(SB)/ Project Company or to give any notice to the Successful Bidder(SB)/ Project Company or to enforce any security held by COPA or to exercise, levy or enforce any distress, diligence or other process against the Successful Bidder(SB)/ Project Company.

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

Signature_ _____

Name

Power of Attorney No.

Email ID

For

[Insert Name of the Bank]
Stamp and Full Address. Dated this day of _____

Banker's
, 20__

Witness:

1..... Signature

Name

Address

1. Signature Name and Address

FORMAT FOR BOARD RESOLUTIONS

The Board, after discussion, at the duly convened Meeting on [Insert date], with the Consent of all the Directors present and in compliance of the provisions of the Companies Act, 1956 or Companies Act 2013, as applicable, passed the following Resolution:

1. **RESOLVED THAT** Mr/Ms....., be and is hereby authorized to do on our behalf, all such acts, deeds and things necessary in connection with or incidental to our response to RfS vide RfS No.....for 'Selection of 1.5 MW(50MW x 03) Grid Connected Floating Solar Power Projects' in Backwaters of Cochin Port Authority, India, including signing and submission of all documents and providing information/response to RfS to Solar Energy Corporation of India Limited (COPA), representing us in all matters before COPA, and generally dealing with COPA in all matters in connection with our bid for the said Project. **(To be provided by the Bidding Company or the Lead Member of the Consortium)**
2. **FURTHER RESOLVED THAT** pursuant to the provisions of the Companies Act, 1956 or Companies Act, 2013, as applicable and compliance thereof and as permitted under the Memorandum and Articles of Association of the Company, approval of the Board be and is hereby accorded to invest total equity in the Project. **(To be provided by the Bidding Company)**

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

FURTHER RESOLVED THAT pursuant to the provisions of the Companies Act, 1956 or Companies Act, 2013, as applicable and compliance thereof and as permitted under the Memorandum and Articles of Association of the Company, approval of the Board be and is hereby accorded to invest (----%) equity [Insert the % equity commitment as specified in Consortium Agreement] in the Project. **(To be provided by each Member of the Bidding Consortium including Lead Member such that total equity is 100%)**

FURTHER RESOLVED THAT approval of the Board be and is hereby accorded to participate in consortium with M/s-----[Insert the name of other Members in the Consortium] and Mr/ Ms....., be and is hereby authorized to execute the Consortium Agreement. **(To be provided by each Member of the Bidding Consortium including Lead Member)**

And

FURTHER RESOLVED THAT approval of the Board be and is hereby accorded to contribute such additional amount over and above the percentage limit (specified for the Lead Member in the Consortium Agreement) to the extent becoming necessary towards the total equity share in the Project Company, obligatory on the part of the Consortium pursuant to the terms and conditions contained in the Consortium Agreement dated.....executed

by the Consortium as per the provisions of the RfS. **[To be passed by the Lead Member of the Bidding Consortium]**

3. NOTUSED

Certified True Copy

(Signature, Name and Stamp of Company Secretary) Notes:

- 1) This certified true copy should be submitted on the letterhead of the Company, signed by the Company Secretary/Director.
- 2) The contents of the format may be suitably re-worded indicating the identity of the entity passing the resolution.
- 3) This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act, 1956 or Companies Act, 2013 as applicable may be suitably modified to refer to the law applicable to the entity submitting the resolution. However, in such case, the foreign entity shall submit an unqualified opinion issued by the legal counsel of such foreign entity, stating that the Board resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing Company and the authorizations granted there in are true and valid.

Certified True Copy

(Signature, Name and Stamp of Company Secretary) Notes:

- 1) This certified true copy should be submitted on the letterhead of the Company, signed by the Company Secretary/Director.
- 2) The contents of the format may be suitably re-worded indicating the identity of the entity passing the resolution.
- 3) This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act, 1956 or Companies Act, 2013 as applicable may be suitably modified to refer to the law applicable to the entity submitting the resolution. However, in such case, the foreign entity shall submit an unqualified opinion issued by the legal counsel of such foreign entity, stating that the Board resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing Company and the authorizations granted there in are true and valid

FORMAT FOR CONSORTIUM AGREEMENT

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

THIS Consortium Agreement (“Agreement”) executed on this Day of Two Thousand Twenty Three between M/s..... [Insert name of Lead Member] a Company incorporated under the laws of and having its Registered Office

At(hereinafter called the “**Member-1**”, which expression shall include its successors, executors and permitted assigns) and M/s.... a Company incorporated under the laws of and having its Registered Office at (hereinafter called the “**Member-2**”, which expression shall include its successors, executors and permitted assigns), M/s..... a Company incorporated under the laws ofand having its Registered Office at (hereinafter called the “**Member-n**”, which expression shall include its successors, executors and permitted assigns), [The Bidding Consortium should list the details of all the Consortium Members] for the purpose of submitting response to RfS and execution of Power Purchase Agreement (in case of award), against RfS No. dated issued by Cochin Port Authority (COPA), a Company incorporated under the Companies Act, 2013, and having its Registered Office at D-3, 1stFloor, Wing-A, Prius Platinum Building, District Centre, Saket, NewDelhi-110017

WHEREAS, each Member individually shall be referred to as the “Member” and all of the Members shall be collectively referred to as the “Members” in this Agreement.

WHEREAS COPA desires to purchase Power under the said RfS.

WHEREAS, COPA had invited response to RfS vide its Request for Selection (RfS) No....

WHEREAS the RfS stipulates that in case response to RfS is being submitted by a Bidding Consortium, the Members of the Consortium will have to submit a legally enforceable Consortium Agreement in a format specified by COPA where in the Consortium Members have to commit equity investment of a specific percentage for the Project.

NOW THEREFORE, THIS AGREEMENT WITNESSTH AS UNDER:

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

1. We, the Members of the Consortium and Members to the Agreement do hereby unequivocally agree thatMember-1(M/s), shall act as the Lead Member as defined in the RfS for self and agent for and on behalf ofMember-2, ----, Member-n and to submit the response to the RfS.
2. The Lead Member is hereby authorized by the Members of the Consortium and

Members to the Agreement to bind the Consortium and receive instructions for and on their behalf.

3. Notwithstanding anything contrary contained in this Agreement, the Lead Member shall always be liable for the equity investment obligations of all the Consortium Members i.e. for both its own liability as well as the liability of other Members.
4. 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 equity 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.
5. Subject to the term so this Agreement, the share of each Member of the Consortium in the issued equity share capital of the Project Company is/shall be in the following proportion:

Name	Percentage
Member 1	---
Member 2	---
Member n	---
Total	100%

We acknowledge that after the execution of PPA, the controlling shareholding (having not less than 51% of the voting rights and paid-up share capital) in the Project Company developing the Project shall be maintained for a period of 01 (One) Year after commencement of supply of power.

6. The Lead Member, on behalf of the Consortium, shall inter alia undertake full responsibility for liaising with Lenders or through internal accruals and mobilizing debt resources for the Project, and ensuring that the Seller achieves Financial Closure in terms of the PPA.
7. In case of any breach of any equity investment commitment by any of the Consortium Members, the Lead Member shall be liable for the consequences thereof.
8. Except as specified in the Agreement, it is agreed that sharing of responsibilities as aforesaid and equity investment obligations there to shall not in any way be a limitation of responsibility of the Lead Member under these presents.
9. It is further specifically agreed that the financial liability for equity contribution of the Lead Member shall not be limited in any way so as to restrict or limit its liabilities. The Lead Member shall be liable irrespective of its scope of work or financial commitments.
10. This Agreement shall be construed and interpreted in accordance with the Laws of India and courts at New Delhi alone shall have the exclusive jurisdiction in all matters relating thereto and arising there under.

11. It is hereby further agreed that in case of being selected as the Successful Bidder, the Members do hereby agree that they shall furnish the Performance Guarantee in favour of COPA in terms of the RfS.
12. It is further expressly agreed that the Agreement shall be irrevocable and shall form an integral part of the Power Purchase Agreement (PPA) and shall remain valid until the expiration or early termination of the PPA in terms thereof, unless expressly agreed to the contrary by COPA/COPA.
13. The Lead Member is authorized and shall be fully responsible for the accuracy and veracity of there presentations and information submitted by the Members respectively from time to time in the response to RfS.
14. 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 the PPA except with prior written consent of COPA/COPA.
15. 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 COPA/COPA.
16. All the terms used in capitals in this Agreement but not defined herein shall have the meaning as per the RfS and PPA.

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

For M/s [Member1]

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

Witnesses:

1)Signature-----

2) Signature -----

Name: Address:

Name: Address:

For M/s [Member2]

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

Witnesses:

1) Signature-----

Name:

Address:

For M/s _____[Members]

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

Witnesses:

1) Signature-----

Name:

Address:

(2) Signature -----

Name:

Address:

2) Signature -----

Name:

Address:

FORMAT FOR FINANCIAL CAPABILITY

(To be submitted on the letterhead of Bidding Company)

To,

Cochin Port Authority
W/Island
Kochi-682009

Dear Sir,

Sub: Bid for “-----” in response to the RfS No-----

a. We submit our Bid(s) for the total capacity of kW (Insert total offered capacity in kW and submit details of our Financial Eligibility Criteria

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

The maximum Annual turnover of RupeesCrore per MW in any one of the last 3 financial years preceding the Bid Deadline subject to the condition that the Bidder should at least have completed one financial year .

OR

Net worth of Rs.....Crore computed as per instructions provided in Clause 2.4.3. (Strike Out whichever Is Not Applicable)

Financial eligibility criteria

Name of Financially Evaluated Entity*	Relationship with Bidding Company**	Financial year	Year of Incorporation of the Bidding company	***Total Maximum Annual Turnover (Rs. Crore)	Net worth as per Clause 2.4.3 (in Rs. Crore)

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

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

*** Bidder shall furnish maximum annual turnover in any of the last three financial years.

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:

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 DISCLOSURE

(This should be submitted on the Letter Head of the Bidding Company/ Each Member of the Consortium)

DISCLOSURE

Ref. No.

Date:

From: (Insert name and address of Bidding Company)

Tel.#:

Fax#:

E-mail address#

To

Cochin Port Authority
W/Island

Sub: Response to RfS No. -----for Selection of Solar Power Developers for -----

Dear Sir/ Madam,

We hereby declare and confirm that only we are participating in the RfS Selection process for the RfS No. and that our Parent, Affiliate or Ultimate Parent or any Group Company with which we have direct or indirect relationship are not separately participating in this selection process.

We further declare that the above statement is true & correct. Wear aware that if at any stage it is found to be incorrect, our response to RfS will be rejected and if LoI has been issued or PPA has been signed, the same will be cancelled and the bank guarantees will be encashed and recoveries will be effected for the payments done.

Dated the day of , 20....

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

FORMAT FOR TECHNICAL CRITERIA

(This should be submitted on the Letter Head of the Bidding Company/ Lead Member of Consortium)

Ref. No.

Date:

From: (Insert name and address of Bidding Company)

Tel.#:

Fax#:

E-mail address#

To

Cochin Port Authority

W/Island

Sub: Response to RfS No. ---- Dated ---- for Selection of Solar Power Developers for-----

Dear Sir/ Madam,

We hereby undertake to certify in line with **Clause No.--, Section-II, ITB** under the title "Financial Closure" that the following details shall also be furnished within **06 (Six) months** of effective date of the PPA.

- 1.0 Evidence of achieving complete tie-up of the Project Cost through internal accruals or through a Financing Agency.
- 2.0 Evidence of clear possession of the required water body for the Project along with following documentary evidence:-
 - i) Ownership or lease hold rights (as per Section-II, ITB) in the name of the Solar Power Developer and possession of 100% of the area of location required for the Project.
 - ii) Certificate by the concerned and competent revenue/registration authority for the acquisition/ ownership/ right to use/ vesting of the area in the name of the Solar Power Developer.
 - iii) Sworn affidavit/ any other agreement from the authorized signatory of the SPD listing the details of the location and certifying that total area required for the Project is under clear possession of the SPD.
 - iv) A certified English translation from an approved translator in case above

documents are in languages other than English and Hindi.

Failure or delay on our part in achieving the above conditions shall constitute sufficient grounds for encashment of our Performance Bank Guarantee.

Dated the day of , 20....

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name
Power of Attorney/ Board Resolution/ Declaration.

**DECLARATION BY THE BIDDER FOR THE
PROPOSED TECHNOLOGY TIE-UP UNDER PART-B**

1	Name of Bidding Company/ Lead Member of Bidding Consortium	
2	Name of the Technology Partner (if any)	
3	Project Location	
4	Capacity Proposed MW
5	Technology Proposed to be adopted for the Project	
6	Estimated Annual Generation of Electrical Energy	kWh
7	Brief about the Proposed Technology	
	Crystalline Silicon Solar Cells and Modules	
	Concentrator PV Modules	
	Thin Film Modules	
	Any Other Technology	

Dated the_ day of , 20....

Thanking you,
We remain, Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

Selection of Solar Power Developers for-----

ORGANIZATION DETAILS

S. No	Particulars	Details
1	Name of the Company	
2	Registered Office Address	
3	Telephone, Telex, Fax No	
4	E-mail	
5	Web site	
6	Authorized Contact Person(s) with name, designation Address and Mobile Phone No., E-mail address/ Fax No. to whom all references shall be made	
7	Year of Incorporation	
8	Bidding company PAN Number	
9.	Bidding company TAN Number	
10.	Have the bidder/Company ever been debarred By any Govt. Dept. / Undertaking for undertaking any work.	
11.	Reference of any document information attached by the Bidder other than specified in the RFP.	
12.	Whether the Bidder wishes to form a Project Company for execution of work	Yes/No/May be
13.	Bidding company is listed in India	Yes/No
14.	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	
15.	Bid Bond Bank guarantee No	
16.	Validity of Bid Bond	
17.	<ul style="list-style-type: none"> • Banker E-mail ID, • FAX No of the banker • Correspondence address & Pin Code 	

(Signature of Authorized Signatory) With Seal

Selection of Solar Power Developers for-----

Tenderer shall furnish Details of “eligibility works experience” as per Minimum Eligible Criteria (MEC) of Instruction to Tenderer and certificates in the following format (Client Certificates/work completion certificates or any other documentary evidences with respect to the eligibility work)

ELIGIBLE ASSIGNMENT DETAILS FOR MQC

Assignment Number :

Description	Bidder to fill up the details here
Name and Address of the Client	
Title of the Eligible Assignment	
Date of completion of the Eligible Assignment	
Project Completion Cost	
Reference No. of the enclosed Client Completion Certificate/ Documentary Evidence for having successfully completed the Eligible assignment	
Name, telephone no, telefax no and email address of the client’s representative	
Description and Scope of Work	

Instructions:

- i) Bidders are expected to provide information in respect of Eligible Assignments in this Section. The assignments cited must comply with the Minimum eligibility of the Instructions to Tenderers”.
- ii) A separate sheet should be filled for each of the eligible assignments.
- iii) The details are to be supplemented by documentary proof from the respective client /owner for having carried out such assignment duly certified by clients/ owner.
- iv) The works indicated in this Annexure- 4 will be only being considered for evaluation. Mere submission of work completion certificate will not be considered as Eligible Assignments
- v) Original or notary certified copy of completion certificates of each work issued by the owner/ the responsible officers of the owner under whom he has executed

such contracts shall be attached. The certificate shall invariably contain the following among other things.

- a) Details of work involved specifying the nature of work
 - b) The completion cost of the work and
 - c) Date of commencement ; and
 - d) Date of completion of the work.
- vi) If the experience in similar works is as a member of joint venture, notary attested copy of joint venture agreement in this respect shall be attached.
 - vii) If the experience in similar works is as a subcontractor, notary attested copy(s) of approval issued by the Employer(s) authorizing as a sub-contractor; in proof of the claim of the tenderer as a sub-contractor shall be attached.
 - viii) If the experience in similar work is in works executed in private sectors/organizations, the Form 26AS with notary attested copy(s) work order and completion certificate.
 - ix) The tenderer is also obliged to produce the original of the certified copy(s) on request by the department.

Signature
(Authorized Signatory)

Format 7.14

Selection of Solar Power Developers for_____

DETAILS OF PAST EXPERIENCE OF CONTRACTORS FOR SIMILAR WORKS

Sl. No.	Name & Location of Project	Owner's Complete address including TeleFax No. with contact Person	Value of Contract	Duration of Contract			Details of work including major items of work involved	Reference No. & Date of letter of intent & completion certificate enclosed
				Comment date	Scheduled completion date	Actual completion date		
1	2	3	4	5	6	7	8	9

Note: Bidder to enclose completion certificate issued by owner, certified by a Notary public or equivalent certifying authority.

SIGNATURE OF TENDERER

Certificate of Relationship of Parent Company or Affiliate with the Bidding Company

To,

Cochin Port Authority
W/Island
Kochi-682009

Dear Sir,

Sub: Bid for Implementation of 1.5MWp floating solar system at Cochin Port Authority

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 RFS 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/ applicant company	Name of the Affiliate of the Bidding company/ Applicant 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/ Applicant 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

Cochin Port Authority

W/Island

Kochi-682009

Dear Sir,

We refer to the RFP No.....dated.....for “-----”

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

We confirm that M/s.....(Insert name of Bidding Company/) has been authorized by us to use our Technical and or financial capability for meeting the Technical and or 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 Successful Bidder”.

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 Managing Director/ Authorised signatory

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

WITNESS

..... (Signature)
Name..... Designation.....

..... (Signature)
Name..... Designation.....

Selection of Solar Power Developers for-----

DETAILS OF PROPOSED APPROACH & METHODOLOGY

Bidder shall furnish a detailed method statement (Technical Note) for carrying out of the works, along with a construction programme [Preferably in MS project / Primavera] showing sequence of operation and the time frame for various segments of temporary and permanent works.

Signature
(Authorized Signatory)

Selection of Solar Power Developers for -----

DECLARATION

We M/s (Name & address of the bidder) hereby declare that:-

1. All details regarding construction plant, temporary work and personnel for site organization considered necessary and sufficient for the work have been furnished in the Annexure 7 and that such plant, temporary works and personnel for site organization will be available at the site till the completion of the respective work.
2. No conditions are incorporated in the financial bid. In case any conditions are specified in the financial bid, the tender will be rejected summarily without making any further reference to the bidder.
3. We have not made any payment or illegal gratification to any persons/ authority connected with the bid process so as to influence the bid process and have not committed any offence under PC Act in connection with the bid.
4. We disclose with that we have * made / not made payments or propose to be made to any intermediaries (agents) etc in connection with the bid.
5. We do hereby confirm that no changes have been made in the tender document downloaded and submitted by us for the above bid. Port Tender document will be treated as authentic tender and if any discrepancy is noticed at any stage between the Port's tender document and the one submitted by the tenderer, the Port's document shall prevail.

Signature
(Authorised Signatory)

*** Note: Delete whichever is not applicable.**

DETAILS OF THE PARTY OPTING FOR REFUND OF EMD THROUGH E-PAYMENT SYSTEM

Name of the Party :
Bank A/c No :
Account type : (Savings / Current / Overdraft)
Bank Name :
Branch :
IFSC Code Number : (11 digit code)
Centre (Location) :
FAX No. :
E-Mail ID : (For forwarding information of remittance)
Mobile No :

Signature
(Authorized Signatory)

Format 7.20

FORMAT FOR FURNISHING BANK INFORMATION FOR e-PAYMENT

1	Name and full address of the beneficiary	
2	Credit Account No. (Should be full 14 digit)	
3	Account Type (SB or CA or OD)	
4	Name of the Bank	
5	Branch (Full address with telephone No.)	
6	MICR code (Should be 9 digit)	
7	Telephone/Mobile/Fax No. of the beneficiary	Telephone :
		Mobile :
		Fax :
8	Cancelled Cheque	

Signature with seal
(Authorised Signatory)

TECHNICAL SPECIFICATION OF GRID CONNECTED FLOATING SOLAR PV POWER SYSTEM AND OTHER COMPONENTS

The proposed project shall be commissioned as per the technical specifications given below:

1. DEFINITION

The Grid Connected Floating Solar Photo Voltaic (PV) power plant of 1.5 MWp capacity consists of PV array, Module Mounting Structure, Power Conditioning Unit (PCU) consisting of Maximum Power Point Tracker (MPPT), Inverter and Controls & Protections, interconnect cables and switches. PV Array shall be mounted on a suitable structure. The design and commissioning also shall be as per latest IEC/BIS standards.

2. SITE DETAILS AND SITE ASSESSMENT

The following are some of the technical measures required to ensure quality of the major components used in grid connected solar power Projects:

- a) The 1.5 MW Floating Solar Power Plant shall be installed at the Backwaters near CoPA's Walkway Avenue between BOT junction and Kannangatt bridge at W/Island, Cochin Port Authority, Kerala.
- b) Claims and objections due to ignorance of site condition will not be considered after submission of the bid. Bidder shall fully acquaint himself to the nature of work, location and other environmental conditions and necessary statutory approvals required for the commissioning of the 1.5 MWp floating solar project. The bidder shall be deemed to have independently obtained all the necessary information required for the submission of the bid.
- c) Bidder should have visited and carefully examined the site and surroundings for development of Floating Solar PV project.
- d) Bidder should acquaint himself of the statutory requirements / approvals essentially required for the successful implementation of the Floating Solar PV project from the authorities like KSERC, CEA , KCZMA and shall coordinate with Statutory Authorities along with CoPA and CoPA will issue necessary authorization/ letters to approach the statutory authorities.

3. FLOATING SOLAR SYSTEM

3.1. SYSTEM DESCRIPTION:

A Grid Connected Floating Solar Photovoltaic (FSPV) System shall consist of mainly the following components but not limited to any other components and accessories required to install and commission the same.

- a) Solar panels consisting of adequate capacity of solar PV Modules of suitable rating.

- b) Module mounting structure.
 - c) Floating system.
 - d) Mooring and anchoring system.
 - e) String monitoring units/ Junction boxes.
 - f) Grid interactive Power Conditioning Unit with (PCU) of suitable rating along with MPPT mechanism.
 - g) Inverter rated Transformer
 - h) 11kV Transmission line
 - i) Metering system.
 - j) Earthing system and lightning protection
 - k) IR/UV protected Cable and other accessories. DC and AC power cables of appropriate size with cable termination kit
 - l) 11kV Breaker panel with necessary protection and metering
 - m) The solar PV Project shall be compatible with the proposed Supervisory Control and Data Acquisition (SCADA) and should be integrated with the software.
 - n) Indoor 11kV switchgear panels including Vacuum Circuit Breakers, Current Transformers, Voltage Transformers, Relays and other accessories for complete protection at the point of interconnection.
 - o) ABT / SMART meters with all necessary metering rated CTs and PTs at the interconnecting substation as per CEA metering regulation 2006 as amended time to time and state metering code
 - p) Any other equipment/ material, not mentioned but required to complete the solar power plant facilities in all respect.
- A. The design of Floating Solar system shall be certified by the Third Party accredited agencies competent to approve the design.
 - B. The floating system shall be designed in such a way that it shall appropriately incorporate walking platforms for regular maintenance and inspection.
 - C. Appropriate anchoring/ mooring system shall be designed to keep the floating platforms in position in order to adopt tidal waves, wind and water level variations of the location. The same shall be designed to ensure that the Floating PV panels along with mounting structure always float on the surface of water.

3.2 SOLAR PHOTOVOLTAIC MODULES (PVMODULES)

- 1) The Design requirements of Photo Voltaic arrays PV including DC array wiring, electrical protection devices and earthing provisions shall confirm to IEC 62548.
- 2) Modules installed shall use RF identification tag and contain the following information.
 - a) Name of the manufacturer of the PV module.
 - b) Name of the manufacturer of Solar Cells.
 - c) Month & year of the manufacture (separate for solar cells and modules)
 - d) Country of origin (separately for solar cells and module)
 - e) Unique Serial No and Model No of the module
 - f) Valid certification of PV module.
- 3) Use of advanced cell technologies

- a) The Contractor shall try to maximize the output within the allocated area. The contractor shall employ the latest technology.
- b) Based on the technology employed, the contractor has to design Electrical System Features, Architecture and Structural requirement and the same shall be approved by CoPA Engineers.
- c) Standards and Codes

The PV Modules used in the grid solar power projects shall normally qualify the latest edition of the following IEC PV module qualification test/ equivalent BIS standards as specified below: -

Standard	Description
IEC 63049	Defines the process starting from shipments of components to the installation site and includes the transport, unpacking, racking, construction, module installation process and operation and maintenance of the PV system,
IEC 62446 - 1	Defines the information and documentation required to hand over the customer following the installation of Grid connected PV system. It also describes the commissioning tests, inspection criteria and documentation for the safe installation and correct operation of the system.
IEC 61829	ON-SITE measurement of Current-Voltage characteristics. This standard specifies procedures for onsite measurement of flat plate Photo Voltaic array characteristics, the accompanying meteorological conditions and translating to Standard Test Conditions (STC) or other selected conditions. Measurement of PV array Current-Voltage (I-V) characteristics under actual on -site conditions.
IEC 62446-2	System maintenance. Defines Preventive, Corrective and performance related Maintenance requirements and recommendations for Grid connected PV Systems. The procedure covers Basic maintenance of the System components and connections for reliability, safety and Fire prevention.
IEC 61724 - 1	Out lines Terminology, Equipment and Methods for Performance monitoring and Analysis of Photo Voltaic (PV) Systems. Monitoring of Bifacial Systems. Irradiance Sensor requirements. Soiling measurement based on latest technology.
IEC 61724 - 2	Photo Voltaic System Performance - Part - 2. Capacity Evaluation method. Defines the procedure for comparing the measured power produced against the expected power from a PV System.

3.3 FLOATING DEVICE

- a) The floatation device should be manufactured from appropriate thermoplastic with suitable UV stabilizer or thermoset plastic with suitable UV stabilizer or any other suitable material which shall not affect the water quality or contaminate the water. The life of floatation device shall be able to sustain for a minimum period of 25 years without any discoloration.
- b) Float system should be designed to withstand the maximum wind speed of the location as per Wind Zone Map of India and shall be able to withstand the weight of O&M Personnel, carrying Tools, the forces of nature such as wind, waves and water flow etc.
- c) The material used for floatation device shall be chemically resistant to acid, lye, petrol and mineral oil etc.
- d) The floatation device, when installed in the backwaters shall not restrict the air flow around the panels. In order to facilitate this, the design of the floatation device shall be such that appropriate voids and shall form an integral part of the floatation device design.
- e) The Solar System shall conform to the below mentioned standards, but not limited and is free to adopt better standards established and acceptable to the employer.

Standards and Codes:-

Sl. No.	Standards	Description
1	ASTM D1693 (or equivalent ISO Standards)	Test for Environmental Stress Cracking of HDPE
2.	ISO16770	Stress cracking resistance of HDPE
3.	ASTM D790 (or equivalent ISO Standards)	Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
4.	ISO 178	Plastics -- Determination of flexural properties
5.	ASTM D638, ISO 527	Standard Test Method for Tensile Properties of Plastics
6.	ASTM D695, ISO 604	Standard Test Method for Compressive Strength Properties of Plastics
7.	ISO16770	Full Notch Creep Test (FNCT)
8.	ASTM D2565 (or equivalent ISO Standards)	Standard Practice for Xenon-Arc Exposure of Plastic intended for outdoor Applications
9.	ASTM D4329(or equivalent ISO Standards)	Standard Practice for fluorescent ultraviolet (UV) lamp apparatus exposure of plastics
10.	ASTM G7/G7M-11(or equivalent ISO Standards)	Standard Practice for atmospheric environmental exposure testing of non-metallic

11.	ASTM D1693-15 (or equivalent ISO Standards)	Standard Test Method for Environmental stress cracking of Ethylene plastics
12.	ASTM D5397-07(2012)	Standard Test Method for Environmental stress crack resistance of polyolefin geo-membrane

3.4 ANCHORING / MOORINGSYSTEM

- a) The minimum Life of the Anchoring system shall be 25years.
- b) The Anchors shall be sturdy enough to withstand wind speed at that location
- c) Anchoring system shall be able to withstand the depth/level variation of water level
- d) The materials used in the anchoring system shall not contaminate the back waters or affect the aquatic ecosystem.
- e) The design of anchoring system shall be certified by an accredited national/ international lab to fulfill the above conditions.
- f) The Anchoring/ Mooring system shall comply with latest edition of API RP 2SK or any applicable standards.

3.5 JUNCTION BOXES (JBs)

- a) The junction boxes are to be provided in the PV array for termination of connecting cables. The J. Boxes (JBs) shall be made of GRP/FRP/Powder Coated 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.
- b) Copper bus bars/terminal blocks housed in the junction box with suitable termination threads Conforming to IP65 standard and IEC 62208 Hinged door with EPDM rubber gasket to prevent water entry. Single / double compression cable glands, Provision for earthing the box must be provided.
- c) Each Junction Box shall have High quality Suitable Capacity Metal Oxide Varistors (MOVs) / SPDs, suitable Reverse Blocking Diodes. The Junction Boxes shall have suitable arrangement monitoring and disconnection for each of the groups
- d) Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification

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

3.6 DC DISTRIBUTION BOARD:

- a) DC Distribution Board to receive the DC output from the array field.
- b) DC DBs shall have enclosure of dust & vermin proof conforming to IP 65 protection. The bus bars shall be made of copper of desired size. Suitable capacity MCBs/MCCB shall be provided for controlling the DC power output to the PCU along with necessary surge arrestors.

3.7 AC DISTRIBUTION BOARD:

- a) AC Distribution Board (DB) shall control the AC power from PCU/ inverter, and should have necessary surge arrestors.
- b) All switches and the circuit breakers, connectors should conform to IEC 60947/IS60947, part I.
- c) The change over switches, cabling work should be undertaken by the bidder as part of the project.
- d) All the Panels shall be metal clad, totally enclosed, rigid, floor mounted, air - insulated, cubicle type suitable for operation on three phase / single phase, 415 or 230 volts, 50 Hz .
- e) The panels shall be designed for minimum expected ambient temperature of 50 degrees Celsius, 80 percent humidity and dusty weather.
- f) All indoor panels shall have protection of IP54 or better standards. All outdoor panels shall have protection of IP65 or better standards.
- g) Should conform to latest Indian Electricity Act and rules.
- h) All the 415 or 230 volt AC devices / equipment like bus support insulators, circuit breakers, Surge Protection Devices, Voltage Transformers etc., mounted inside the switchgear shall be suitable for continuous operation .

3.8 POWER CONDITIONERS / INVERTERS

- a) PCU / ARRAY SIZE RATIO:
- b) The combined wattage of all inverters shall be sufficient for achieving 1.5MWp solar generation under Standard Testing Conditions.
- c) Maximum c power point tracker shall be integrated in the PCU/inverter to maximize energy drawn from the array.
- d) PCU/ INVERTER:

As PV array produce direct current electricity, it is necessary to convert this direct current into alternating current and adjust the voltage levels to match the grid voltage. Conversion shall be achieved using an electronic Inverter and the associated control and protection devices. All these components of the system are termed the "Power Conditioning Unit (PCU)". In addition, the PCU shall also house MPPT (Maximum Power Point Tracker), an interface between Solar PV array & the Inverter, the power conditioning unit/inverter should also be DG set interactive, if necessary. Inverter output should be compatible with the grid frequency. Typical technical features of the inverter shall be as follows:

- Switching devices: IGBT/MOSFET
- Controller Type: Microprocessor /DSP
- Nominal AC output voltage and frequency: 415V, 3 Phase, 50 Hz
- Output frequency: 50 Hz
- Grid Frequency Synchronization range shall be between 49.7Hz to 50.3Hz as per CEA Regulations 2010.
- Ambient temperature considered: -20o C to 50o C
- Humidity: 95 % Non-condensing
- Protection of Enclosure: IP54 (Min.) for indoor / IP-65(Min) for outdoor

- Grid Voltage tolerance: - 20% & + 15 %
 - No-load losses: Less than 1% of rated power
 - Inverter efficiency (minimum): >93%
 - HD: < 3%
 - PF: >0.95
- i) PCU/inverter shall be capable of complete automatic operation including wakeup, synchronization & shutdown.
 - ii) The output power factor of PCU inverter shall be suitable for all voltage ranges or sink of reactive power, inverter should have internal protection arrangement against any sustainable fault in feeder line and against the lightning on feeder.
 - iii) Built-in meter and data logger to monitor plant performance through external computer shall be provided.
 - iv) The power conditioning units / inverters should comply with applicable IEC/ equivalent BIS standard for efficiency measurements and environmental tests as per standard codes IEC 61683/IS 61683 and IEC 60068- 2(1,2,14,30) /Equivalent BIS Std.
 - v) The charge controller (if any) / MPPT units environmental testing should qualify IEC 60068-2(1, 2, 14, 30)/Equivalent BIS Std.
 - vi) The PCU/ inverters should be tested from the MNRE approved test centers / NABL /BIS /IEC accredited testing- calibration laboratories. In case of imported power conditioning units, these shall be approved by any IACS certified testing lab.
- e) **INTEGRATION OF PV POWER WITH GRID:**
 The output power from PV would be fed to the inverters which converts DC produced by PV array to AC and feeds it into the 11kV grid of the 110kV substation of CoPA at Willingdon Island after synchronization. In case of grid failure, or low or high voltage, solar PV system shall be out of synchronization and shall be disconnected from the grid.
- f) The Power Conditioners/Inverters of the PV power plants must conform to the latest edition of IEC/ equivalent BIS Standards as specified below:

Efficiency Measurements	IEC 61683
Environmental Testing	IEC 60068-2/ IEC 62093
Electromagnetic Compatibility (EMC)	IEC 61000-6-2, IEC 61000-6-4 & other relevant parts of IEC 61000
Electrical Safety	IEC 62103/ 62109-1&2/ IS 16221-1&2
Protection against Islanding of Grid (Anti-Islanding Protection)	IEEE1547/IEC Standards 62116/ UL1741/ IS 16169 Or equivalent BIS
LVRT Compliance (Low voltage Ride Through)	As per the latest CERC Guidelines/ Order/ Regulations
Grid Connectivity	Relevant CERC Regulations (including LVRT Compliance) and Grid Code as amended and

	revised from time to time.
Rated capacity	Nominal/ Rated output power of the inverter (if different power ratings are mentioned at different temperatures, then power rating at 50 ⁰ C shall be considered) in kW will be considered as inverter rated capacity.
Approved makes	As per MNRE / BIS list of approved makes

3.9 TRANSFORMER & METERING:

- a) Dry/oil type relevant kVA, 415V /11kV, 50 Hz Step up Inverter rated Transformer along with all protections, switch gears, Vacuum circuit breakers, cables etc. along with required civil work. All the SS components shall be of SS304/ SS316 grade.
- b) Transformers having 11 kV at HV side with breaker on LT and HT sides shall be used for stepping up the voltage to 11kV for the Solar Power Plant.
- c) Transformers shall be of reputed make and should have relevant IS or international standards. Transformers shall have all relevant monitoring and protection devices as per the relevant Indian Standards/ International standards.
- d) Rating of each transformer shall be standard type. The transformer manufacturer shall provide test certificates carried out on the transformers as per relevant IS standards. 11 kV Transformer shall conform to IS: 2026.
- e) LV windings voltage is decided based on the inverter output voltage. The rating of transformer (kVA) is decided based on combined rating of Inverters.
- f) The high voltage power from the transformers is routed through 11kV HT cable to 110kV substation
- g) The bidirectional SMART meter (0.2 S class) shall be installed for the measurement of energy.
- h) The bidder shall take approval from CEA (Central Electricity Authority) for the connectivity, technical feasibility, and synchronization of PV plant with distribution network and submit the same to CoPA before commissioning of PV plant.

3.10 PROTECTIONS

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

3.10.1 LIGHTNING PROTECTION

The PV power plants shall be provided with lightning & over voltage protection. The main aim in this protection shall be to reduce the over voltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc. The entire space occupying the PV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors. Lightning protection should be provided as per IS/IEC 62305 standard. The protection against induced high-voltages shall be provided by the use of metal oxide varistors (MOVs) and suitable earthing such that induced transients find an alternate route to earth.

3.10.2 SURGE PROTECTION

Internal surge protection shall consist of three MOV type surge-arrestors connected from +ve and -ve terminals to earth (via Y arrangement)

3.10.3 EARTHING PROTECTION

Earth resistance shall not be more than 5 ohms. It shall be ensured that all the earthing points are bonded together to make them at the same potential.

3.10.4 GRID ISLANDING:

a) In the event of a power failure on the electric grid, it is required that any independent power-producing inverters attached to the grid turn off in a short period of time. This prevents the DC-to-AC inverters from continuing to 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 PV system shall be equipped with islanding protection.

In addition to disconnection from the grid (due to islanding protection) disconnection due to under and over voltage conditions shall also be provided.

b) A manual disconnect 4pole isolation switch beside automatic disconnection to grid would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance. This switch shall be locked by the utility personnel

3.10.5 HT EQUIPMENT

- a) The 11 kV side equipment and parts shall be earthed as required under provisions of IS 3043. The system shall be designed with appropriate CTs & PTs to have all relevant protection. In addition, CTs and PTs shall also be provided for metering and protection purposes as elsewhere specified.
- b) The HT side shall have the following protections
- c) Over current & earth fault relay with under voltage & over voltage protection under and over frequency protection relays.
- d) Reverse Power Relay shall be provided in 11kV VCB panel.
- e) The Solar PV system and associated power transmission system shall be protected as per relevant Indian Standards.

3.10.6 Earthing

Standards and Codes

Earthing system shall comply with latest revisions and amendments of the relevant IEC standards and IS codes. In particular, Earthing system shall comply with the following standards and codes.

Standard/Code	Description
IS 3043	Code of Practice for Earthing
IEEE 80	IEEE Guide for Safety in AC Substation Grounding
IEEE 142	IEEE Recommended Practice for Grounding of Industrial and Commercial Power Systems

3.11 EXPORT OF SURPLUS ENERGY

The surplus energy during any time block can be exported to KSEB Ltd' Grid.

3.12 CABLES ANDCONNECTORS

All cables and connectors to be used for installation of solar field must be of solar grade which can withstand harsh environment conditions for 25 years and voltages as per latest IEC standards. The Cables of 600-1800 Volts DC for outdoor installations complying with the BIS/International Standards shall be used.

The cables laid in the water area shall be of submarine power cables conforming to IEC63026-2019. Cables should have adequate protection system to withstand the adverse environmental condition of the site.

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

- a) Shall meet IEC 60227/IS 694, IEC 60502/IS1554 standards
- b) Temp. Range: -10°C to +50°C.
- c) Voltage rating 660/1100VAC.
- d) Excellent resistance to heat, cold, water, oil, abrasion, UV radiation
- e) Flexible
- f) Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop (power loss) of the entire solar system to the minimum. The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use.
- g) Cable Routing/ Marking: All cable/wires are to be routed through suitable cable tray arrangements to withstand the marine atmosphere tagged and marked with proper manner by good quality ferrule or by other means so that the cable can be easily identified.
- h) The Cable should be so selected that it should be compatible to the life of the solar PV panels i.e. 25years.
- i) The ratings given are approximate. Bidder has to indicate size and length as per system design requirement. All the cables required for the solar plant are to be provided by the bidder. All cable laying schedules/layout drawings shall be got approved prior to installation.
- j) Multi Stranded, annealed high conductivity copper conductor PVC type 'A' pressure extruded insulation or XLPE insulation. Overall PVC/XLPE insulation for UV protection Armored cable for underground laying. All cable trays including covers to be provided. All cables shall conform to latest edition of IEC/ equivalent BIS standards.
- k) Description Standard Number Cables General Test and Measuring Methods, PVC/XLPE insulated cables for working Voltage up to and including 1100 V, UV resistant for outdoor installation IS /IEC 69947.
- l) The size of each type of DC cable selected shall be based on minimum voltage drop however; the maximum drop shall be limited to 1%.

- m) 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 %.

3.13 DANGER BOARDS AND SIGNAGES:

Danger boards should be provided wherever necessary as per Indian Electricity Act/Rules as amended from time to time. The signages shall be provided at appropriate places. Text of the signage shall be approved by the employer.

3.14 FIRE EXTINGUISHERS:

The firefighting system for the proposed power plant for fire protection shall be consisting of:

- a) Portable fire extinguishers in the control room for fire caused by electrical short circuits
- b) Sand buckets in the control room
- c) The installation of Fire Extinguishers should confirm to BIS standards. The fire extinguishers shall be provided in the control room housing PCUs.

3.15 DRAWINGS & MANUALS:

Six sets of Electrical drawings installation and O&M manuals shall be supplied. Bidders shall provide complete technical data sheets for each equipment giving details of the specifications along with make/makes in their bid along with basic design of the power plant and power evacuation, synchronization along with protection equipment.

3.16 PLANNING AND DESIGNING:

- a) The bidder should carry out Shadow Analysis at the site and accordingly design strings & arrays layout considering optimal usage of sunlight.
- b) The bidder shall submit preliminary drawing for approval & based on any modification or recommendation, if any. The bidder submits three sets and soft copy in CD of final drawing for formal approval to proceed with construction work.

3.17 DRAWINGS TO BE FURNISHED BY BIDDER AFTER AWARD OF CONTRACT

The Contractor shall furnish the following drawings and submit to CoPA after getting approval from third party inspection agency for approval

- a) General arrangement and dimensioned layout
- b) Schematic drawing showing the requirement of PV panel, Power conditioning Unit(s)/ inverter, Junction Boxes, AC and DC Distribution Boards, meters etc.
- c) Structural drawing of the PV Array, Mounting Structure, Anchoring Arrangements and Foundation..
- d) Itemized bill of material for complete PV plant covering all the components and associated accessories.
- e) Layout of solar Power Array
- f) Shadow analysis of the area proposed

3.18 SOLAR PV SYSTEM FOR MEETING THE ANNUAL ENERGY REQUIREMENT

Key Performance Indicators

The contractor shall furnish monthly reports on above, without fail.

- 1) PV Array Energy Yield
- 2) Final System Yield
- 3) PV System Efficiency (DC/AC)
- 4) CO2 Savings
- 5) Environment, Health & Safety

3.19 SAFETY MEASURES:

The bidder shall take entire responsibility for electrical safety of the installation(s) including connectivity with the grid and follow all the safety rules & regulations applicable as per Electricity Act, 2003 and CEA Regulation 2010 as amended from time to time.

3.20 Interface to the SCADA system:

The Solar panel Developer shall provide SCADA accessibility to the solar power plant with SCADA proposed to be installed by CoPA under RDSS so as to monitor, control and rectify the faults immediately. Hardware and software used in solar power plant shall be in compliance with CEA cyber security guidelines/norms for power plant.

3.21 DATA ACQUISITION SYSTEM/PLANT MONITORING

Data Acquisition System shall be provided for each of the solar PV plant. It shall be communicated with the proposed SCADA network of CoPA.

1. SAFE DISPOSAL OF SOLAR PV MODULES

The SPD will ensure that all Solar PV modules, floats, and other components from their plant after their 'end of life' (when they become defective/ non-operational/ non-repairable) are disposed in accordance with the "e-waste (Management and Handling) Rules, 2011" notified by the Government and as revised and amended from time to time.

2. STATUTORY APPROVALS

Any neglect or omission or failure on the part of the bidder in obtaining necessary clearances and reliable information upon the forgoing or any other matter affecting the bid shall not relieve him from any risks or liabilities or the entire responsibility for completion of the work in accordance with the bid.

3. RIGHT OF INSPECTION

- A. COPA reserves the right to inspect the components before dispatch at site.
(or) alternatively give dispatch clearance based on the testing & certification by third party inspection agency. The cost of third party inspection shall be borne by the solar power developer and the third party inspection agency shall be got approved from CoPA before

appointing them.

- B. COPA, reserves the right to witness Third party test been performed by accredited testing laboratory in India.
- C. SPD shall provide access to COPA for monitoring the performance of the grid connected Floating Solar PV Project during the contract period.
- D. The SPDs shall provide access to COPA for installing any additional monitoring equipment to facilitate on-line transfer of data.

4. SUBMISSION DETAILS

The SPD shall provide/submit, free of cost to COPA all the Detailed Engineering Document with detailed specification, schematic drawing, circuit drawing, cable routing plans and test results, manuals for all deliverable items, Operation, Maintenance & Safety Instruction Manual and other information about the project, Bill of material, data etc.

COMMISSIONING PROCEDURE

(This is for Reference Only; The Commissioning Procedure will be guided by as per PPA)

- i) The plant shall be commissioned only on getting statutory approval for energization by CEA and other statutory bodies.
- ii) SPDs shall give to COPA at least 30 (Thirty) Days advance written notice, of the date on which it intends to synchronize the Power Project to the Grid System. The SPD shall be solely responsible for any delay or non-receipt of the notice by the concerned agencies, which may in turn affect the Commissioning Schedule of the Project.
- iii) A Solar PV Project will be considered as commissioned if all equipment as per rated project capacity has been installed and energy has flown into 11 kV grid at 110 KV Substation located at Willingdon Island.
- iv) SPD shall ensure that the equipment up to the rated Capacity has been installed and completed in all respects before the Scheduled Commissioning Date. The same shall be tested and certified by the Engineer in charge of the project.

Documents to be submitted to COPA:

The SPD will have to submit the following documents (duly signed and stamped by authorized signatory) well in advance prior to the scheduled commissioning date. The SPD shall also have to submit the hardcopies to COPA if asked by COPA for verification/ cross check.

1. Invoice(s) of the Major Equipment(s) (including but not limited to PV arrays, modules, Inverters/ PCUs, Transformers/ Cables and for all the equipment installed at the site.
2. All supporting documents towards meeting the technical compliance along with datasheet/warranty certificates/contract agreement etc. as mentioned in Annexure-A (if some documents already verified by MNRE appointed committee prior to Financial Closure, may not be required which shall be updated on CPM portal)
3. Plant Layout clearly mentioning the details of rows and number of modules in each row.
4. Documents to be submitted to CEA for online application for the approval of 1.5 MWp Solar plant, CEA inspection report along with all annexure/ attachments and CEA compliance report ,Energisation report to CEA. .
5. SPD shall ensure Connectivity to the grid.
6. Supporting document for "Consent to Operate"

7. Snap Shots of the Plant from various angles shall be taken for covering installation of important components of the solar power plant and made part of Installation Report.
8. Reading of all the inverters (instantaneous and total generation) along with its serial number of a particular date.
9. After the submission of the documents by SPD, COPA shall verify the documents and intimate/reply with remarks. In case any additional supporting/revised documents are asked by COPA, the same have to be submitted by the SPD.
10. After the proposed commissioning date the Engineer-in charge will visit the site within 07 working days to verify the technical compliance on site as per the information submitted by the SPD. In case any deviation/ discrepancy has been observed from the information submitted by the SPD, the same shall be rectified and witnessed by the engineer – in charge and certified.
11. SPD shall have to furnish the required plant related data to COPA's designated server in suitable formats for accessibility. Additionally, SPD shall also provide the login details/SCADA login to COPA for online real time data monitoring. CEA cyber security rules shall be complied with before connecting the plant data to CoPA server.
12. Early Commissioning of a Solar Project prior to the scheduled commissioning date is permitted on acceptance of power by COPA. In order to facilitate this, SPDs shall inform COPA well in advance the date on which it intends to synchronize the Power Project to the Grid System. The SPD shall be required to give an advance notice of at least 30 days prior to the proposed commissioning date.
13. Meter Reading shall be taken at the 110 KV Substation at the time of connectivity of the Project with Grid. This shall include information of respective meters installed at delivery/interconnection point.
14. Solar Power Developers would be required to plan commissioning/synchronization with grid at least 10 (Ten) Days ahead of the last permissible date for commissioning.

INSTALLATION REPORT

(To be provided by SPD and to be submitted at least 10 days prior to Commissioning Date which shall be verified by the Chief Mechanical Engineer or his representative.)

Sr. No.	Capacity of the Project (MW)	
	Capacity already commissioned (MW)	
	Capacity proposed to be commissioned (MW)	
I.	Technology used (please specify along with capacity of each type)	
II.	Rating of each module (Wp)	
III.	Angle from horizontal at which array is installed	
IV.	Number of modules installed of each type	
V.	Source(s) of the cells installed of each type	
VI.	Source(s) of the Modules installed of each type	
VII.	Number of PCUs/ Inverters installed	
VIII.	Source of the PCUs/ Inverters (Name of supplier with address)	
IX.	Rating of PCUs/ Inverters	
X.	Date of Installation of Full Capacity (as per Capacity proposed to be Commissioned)	
	PV Arrays	
	PCUs/ Inverters	
	Transformers	

SAMPLE CONNECTIVITY REPORT

(To be provided by concerned CTU/ STU/ Transmission Utility/ DISCOM)

This is in compliance to the office order of the----, DISCOM,<Place>issued vide office order <No.><dated>,the committee constituted vide said order has completed the work for commissioning of <kV> Bay & Metering Equipment to inter connect the <MW> Solar Power Generation Plant (having <technology>)with Grid installed at <Village>, <Tehsil>, <District> in the <State> on <date>, under Rf SNo.....dated.....

The details of Solar Power Plant are as under:

Sl. No	Name of Solar Power Developer & Location	Capacity Mentioned in PPA	Connectivity	Details of Solar Power Plant (Transformer, Inverter, Modules, Switchgear)
1	<M/s> <Village> <Tehsil> <District>	<> MW	Metering Detail at Delivery Point (<Village>) S.No. of <kV> CT i) <R- Phase> ii) <Y-Phase> iii) <B- Phase> S.No. of < kV> PT i) <R- Phase> ii) <Y-Phase> iii) <B Phase> S.No. of Main<ABT> Meter>S.No. of Check <ABT Meter>S.No. of Standby <ABT Meter> Metering Equipment installed at Receiving end on dated: <> 132 kV GSS, <>, <>, (<Distt.>)	A) Transformer <Make/Type:> <Sr. No.> B) Inverters <Make/Type:> <Sr. No.> C) Modules <Make:> <W>, < W > <Total: Nos.> D) Switchgear Panels <Make/Type:> <Sr. No.> Protection Provided: Under/Over voltage, Over current & Earth fault.

The Commissioning date of various equipment is as under:

<kV> line from --- to -----, completed on date -----.

Line Bay at < kV > GSS, ----- charged for ---- on -----.

<kV> line charged from -----to----- on date ----.

Main & check metering commissioned on.... (initial record of Main/Check meters at the time of

Commissioning is to be taken and enclosed) Complete system commissioned on date-----

The Joint Inspection Report of metering arrangement & copy of permission of Electrical Inspector is enclosed herewith.

SAMPLE SYNCHRONIZATION CERTIFICATE

It is certified that----MW (Capacity)Floating Solar Photovoltaic Power project of M/s
----- ,
Village-----Tehsil/Taluka-----,District-----was Grid connected on.....(Date)at---
-
Hrs.

It is further certified that the Project was synchronized and supply of power into the grid
from the Project connected on.....(Date)at Hrs.
The above certificate is issued on the basis of MRI record.

NB:

- (i) The above certificate shall be issued by concerned STU/ SLDC/ KSEBL /CoPA
- (ii) Copy of duly signed MRI is to been closed.

**SAMPLE COMMISSIONING
CERTIFICATE OF FLOATING SOLAR POWER PROJECT**

This is to certify that <M/s> having its registered office at has successfully commissioned

Capacity < MW > out of total <MW> installed Capacity on (Date) of their Solar PV Power Generation Project at Village -----, Tehsil/ Taluka ----- & Dist. -----

The Commissioning Certificate has been issued on the basis of the following documents enclosed:

- (i) Installation Report including Snap shots of the Project from various angles
- (ii) Electrical Inspector Report
- (iii) Connectivity Report
- (iv) Synchronization Certificate including MRI record

CHECK LIST FOR BANK GUARANTEES

Sl. no.	Details of Checks	Yes/ No
1.	Is the BG on non-judicial Stamp paper of appropriate value, as per applicable Stamp Act of the place of execution	
2.	Whether date, purpose of purchase of stamp paper and name of the purchaser are indicated on the back of Stamp Paper under the Signature of Stamp vendor? (The date of purchase of stamp paper should be not later than the date of execution of 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.	
3.	In case of BGs from Banks abroad, has the BG been executed on Letter Head of the Bank endorsed by the Indian branch of the same bank or SBI, India?	
4.	Has the executing Officer of BG indicated his name, designation and Power of Attorney No./Signing Power no. on the BG?	
5.	Is each page of BG duly signed/ initialed 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 proforma?	
6.	Do the Bank Guarantees compare verbatim with the Proforma prescribed in the Bid Documents?	
7.	Are the factual details such as Bid Document No./ Specification No./ LOI No. (if applicable)/ Amount of BG and Validity of BG correctly mentioned in the BG	
8.	Whether overwriting/ cutting, if any, on the BG have been properly authenticated under signature & seal of executant?	
9.	Whether the BG has been issued by a Bank in line with the provisions of Bidding documents?	
10.	In case BG has been issued by a Bank other than those specified in Bidding Document, is the BG confirmed by a Bank in India acceptable as per Bidding documents?	

Notes:

1. The Stamp Paper should be in the name of the Executing Bank and of appropriate value.
2. The Performance Bank Guarantee shall be executed by any of the Bank from the List of Banks enclosed.

LIST OF BANKS

1. SCHEDULED COMMERCIAL BANKS	3. FOREIGN BANKS
SBI AND ASSOCIATES	24. A B BANK
1. State Bank of India	25. SHINHAN BANK
	26. CTBC BANK Co. Ltd.
NATIONALISED BANKS	27. MIZUHO BANK, Ltd.
1. Allahabad Bank	28. Krung Thai Bank Public Company Ltd.
2. Andhra Bank	29. Antwerp Diamond Bank N.V
3. Bank of India	30. Australia And New Zealand Banking Group Limited
4. Bank of Maharashtra	31. Sumitomo Mitsui Banking Corporation
5. Canara Bank	32. American Express Banking Corporation
6. Central Bank of India	33. Common Wealth Bank of Australia
7. Corporation Bank	34. Credit Suisse A.G
8. Dena Bank	35. FirstRand Bank Ltd.
9. Indian Bank	36. Industrial And Commercial Bank of China Ltd.
10. Indian Overseas Bank	37. JSC VTB Bank
11. Oriental Bank of Commerce	38. National Australia Bank
12. Punjab National Bank	39. Rabobank International
13. Punjab & Sind Bank	40. Sberbank
14. Syndicate Bank	41. USB AG
15. Union Bank of India	42. United Overseas Bank Ltd.
16. United Bank of India	43. Westpac Banking Corporation
17. UCO Bank	44. Woori Bank
18. Vijaya Bank	45. Doha Bank Qsc
19. Bank of Baroda	4. SCHEDULED PRIVATE BANKS
2. OTHER PUBLIC SECTOR BANKS	1. Federal Bank Ltd.
1. IDBI Bank Ltd.	2. ING Vysya Bank Ltd.

3. FOREIGN BANKS	3. Axis Bank Ltd.
1. Bank of America NA	4. ICICI Bank Ltd.
2. Bank of Tokyo Mitsubishi UFJ Ltd.	5. HDFC Bank Ltd.
3. BNP Paribas	6. Yes Bank Ltd.
4. Calyon Bank	7. Kotak Mahindra Bank
5. Citi Bank N.A.	8. IndusInd Bank Ltd.
6. Deutsche Bank A.G	9. Karur Vysya Bank
7. TheHongKong and ShanghaiBanking Corpn. Ltd.	10. Catholic Syrian Bank
8. Standard Chartered Bank	11. City Union Bank
9. Societe Generale	12. Dhanlaxmi Bank. Ltd
10. Barclays Bank	13. Jammu & Kashmir Bank Ltd
11. Royal Bank of Scotland	14. Karnataka Bank Ltd
12. Bank of Nova Scotia	15. Laxmi Vilas Bank Ltd
13. Development Bank of Singapore (DBS Bank Ltd.)	16. Nainital Bank Ltd
14. Crédit Agricole Corporate and Investment Bank	17. Ratnakar Bank Ltd
15. Abu Dhabi Commercial Bank Ltd	18. South Indian bank Ltd
16. Bank of Bahrain & Kuwait B.S.C	19. Tamilnadu Mercantile Bank Ltd
17. Mashreq Bank p.s.c	20. DCB Bank Ltd
18. HSBC Bank Oman S.A.O.G	21. IDFC Bank
19. Sonali Bank Ltd.	
20. J. P. Morgan Chase Bank, National Association	
21. State Bank of Mauritius Ltd.	
22. BANK of CEYLON	
23. BANK INTERNATIONAL INDONESIA	

SPECIAL INSTRUCTIONS TO BIDDERS FOR e-TENDERING AND REVERSE AUCTION

GENERAL

The Special Instructions (for e-Tendering) supplement 'Instructions to Bidders', as given in these Rfs Documents. Submission of Online Bids is mandatory for this RfS.

e-Tendering is a new methodology for conducting Public Procurement in a transparent and secured manner. Now, the Government of India has made e-Tendering mandatory. Suppliers/ Vendors will be the biggest beneficiaries of this new system of procurement. For conducting electronic tendering, Cochin Port Authority(COPA)has decided to use the Portal of Government e-Marketing (<https://gem.gov.in/>).

Benefits to Suppliers are outlined on the Home-page of the portal.

INSTRUCTIONS

Tender Bidding Methodology:

1. View Notice Inviting Tender (NIT) on e tender portal
2. Download Tender Documents from e tender portal
3. Clarification to Tender Documents
 - a) Query to COPA(Optional)
 - b) View response to queries posted by COPA
4. Bid-Submission one tender portal
5. Respond to COPA Post-TOE queries
6. 'e-Reverse Auction' if necessary. Participate in reverse auction if invited

Some Bidding Related Information for this Tender

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

- Submission of Bid-Parts
- Envelope I(Technical-Bid)
- Envelope II(Financial-Bid)
- Submission of digitally signed copy of Tender Documents/ Addendum

In addition to the above, the bidders are required to submit certain documents physically offline also as per Clause No.23.a,Section-II,ITBof RfS Documents, failing which the technical bids will not be opened.

Note:

1. The Bidder should also upload the scanned copies of all the above mentioned original documents as Bid-Annexures during Online Bid-Submission.
2. Submit your bids well in advance of tender submission deadline on ETS (There could be last minute problems due to internet timeout, breakdown, etc.)

ADDITIONAL DO'S AND DON'TS FOR BIDDERS PARTICIPATING IN e-REVERSEAUCTION

1. Get your organization's concerned executives trained for e-Reverse Auction related processes on ETS well in advance of the start of e-Reverse Auction.
2. For responding to any particular e-Reverse Auction, the e-Reverse Auction (ie its Reverse Auction Search Code or RASC) has to be obtained to the authorized person assigned by the bidder
3. It is important for each bidder to thoroughly read the 'rules and related criterion' for the e- Reverse Auction as defined by the Buyer organization.
4. It is important to digitally-sign your 'Final bid' after the end of e-Reverse Auction bidding event.

Minimum Requirements at Bidder's End

- Computer System with good configuration (Min PIV, 1 GB RAM, Windows 7 and above)
- Broadband connectivity
- Microsoft Internet Explorer 7.0 or above
- Registration to GeM portal

Annexure - E

TERMS & CONDITIONS OF REVERSE AUCTION

(If same price is quoted by more than 1 bidder in the ON LINE price bids)

After opening of Financial bids and short-listing of bidders based on the tariff and total capacity of project of qualified Project(s), COPA reserves the right to conduct "REVERSE AUCTION PROCEDURE". Reverse Auction shall be conducted as per methodology specified in Section-V and other provisions of Reverse Auction in RfS Documents and their subsequent Addenda/ Amendments/ Clarifications. Bidders in their own interest, are advised to go through the documents in entirety. The Terms & Conditions and Business Rules mentioned hereunder are in brief and may not give complete explanations. Further these are supplementary in nature.

1. Bidders shall ensure online submission of their 'Bid Price' within the auction period.
2. Business rules for Reverse Auction like event date, time, bid decrement, extension etc. shall be intimated later on, for compliance.
3. Bidders should acquaint themselves of the 'Business Rules of Reverse Auction', which is enclosed separately in the RfS document.
4. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant COPA guidelines, shall be initiated by COPA
5. The Bidder shall not divulge either his Bids or any other exclusive details of COPA to any other party.
6. Period of validity of Prices received through Reverse Auction shall be same as that of the period of validity of bids offered.
7. Bidders should also note that:
 - a) Although extension time is '8' minutes, there is a time lag between the actual placing the bid on the local computer of the bidder and the refreshing of the data on to the server for the visibility to the Owner. Considering the processing time for data exchange and the possible network congestion, bidders must avoid the last minute hosting of the Financial Bid during reverse auction.
 - b) Participating bidder will agree to non-disclosure of trade information regarding the purchase, identity of COPA, bid process, bid technology, bid documentation and bid details.
 - c) It is brought to the attention of the bidders that the bid event will lead to the final price of bidders only.

- d) Technical and other non-commercial queries Order finalization and post order activities such issue of LOI, signing of PPA etc. (not impacting price) can only be routed to the COPA contact personnel indicated in the RfS document.
 - e) In case of any problem faced by the bidder during Reverse Auction and for all Bidding process related queries, bidders are advised to contact the persons of M/s GEM indicated in Annexure - D of the RfS document.
 - f) Bidders are advised to visit the auction page and login into the system well in advance to identify/rectify the problems to avoid last minute hitches.
 - g) COPA will not be responsible for any PC configuration/software/hardware related issues, telephone line glitches and breakdown/ slow speed in internet connection of PC at Bidder's end.
8. No queries shall be entertained while Reverse Auction is in progress.

BUSINESS RULES OF REVERSE AUCTION

Reverse Auction shall be conducted as per methodology specified in Section - V and other provisions of Reverse Auction in RfS documents and their subsequent Amendments/ Clarifications/ Addenda. Bidders, in their own interest, are advised to go through the documents in entirety.

The following would be parameters for e-Reverse Auction:

Sl. No.	Parameter	Value
1.	Date and Time of Reverse-Auction Bidding Event	To be intimated Later to Eligible Bidders
2.	Duration of Reverse-Auction Bidding Event	1 Hour
3.	Automatic extension of the 'Reverse-Auction closing Time', if last bid received is within a 'Predefined Time-Duration' before the 'Reverse-Auction Closing Time'	Yes
3.1	Pre-defined Time-Duration	8 minutes
3.2	Automatic extension Time-Duration	8 minutes
3.3	Maximum number of Auto-Extension	Until there is no bid during the 8 minutes.
4.	Entity-Start-Price	Lowest tariff quoted among the Bidders.

Online Reverse Auction shall be conducted by COPA on pre-specified date and time,

while the bidders shall be quoting from their own offices/place of their choice. Internet connectivity shall have to be ensured by bidders themselves.

During the Reverse Auction, any requests for extension of time will not be considered by COPA. Bidders are therefore requested to make all the necessary arrangements/alternatives whatever required so that they are able to participate in the Reverse Auction successfully. Failure of power or loss of connectivity at the premises of bidders during the Reverse Auction cannot be the cause for not participating in the Reverse Auction. COPA shall not be responsible for such eventualities.

Bidders are advised to get fully trained and clear all their doubts such as refreshing of Screen, capacity/ no. of projects being auctioned, auction rules etc.

COPA reserves the right to cancel/reschedule/extend the Reverse Auction process/tender at any time, before ordering, without assigning any reason.

COPA shall not have any liability to bidders for any interruption or delay in access to the auction website irrespective of the cause. In such cases, the decision of COPA shall be binding on the bidders.

Other terms and conditions shall be as per bidder's techno-commercial offers and as per the RfS document and other correspondences, if any, till date.

1. The bidding guidelines dated 28th July 2023 notified by the Central Government and its amendments for the procurement of power from grid connected solar projects is applicable for the procurement of 1.5MWp grid connected solar plant at Willingdon Island of M/s.CoPA.
2. MNRE Draft Quality Control Manual for Grid Connected Rooftop Solar PV System Dtd- as amended from time to time.
3. MNRE 's ALLM list dated 24/04/2023 as amended from time to time.

A. Guidelines for scrutiny / inspection of Solar Energy System

1. The minimum qualification for carrying out the installation work of a solar energy system shall be a A-Class Contractor licensee and depending up on the capacity of installation, eligible contractors can carry out the work. The bidder shall engage contractor having valid 'A Class' Electrical Contractor's License issued by any State/ Central licensing authority r the bidder should carry out the maintenance/electrical works through a licensed A Class contractor depending on the category of electrical installations. An undertaking to this effect shall be submitted in a stamp paper of Rs. 200/- while submitting the bid.
2. Verify whether the inverter is grid tied or not.
3. Inverter capacity shall be selected based on the solar PV generation, so that maximum generation can be utilized.
4. Solar PV module details such as number of modules, wattage, number of cells, voltage, current etc. shall be verified.
5. It has to be verified whether PV module shall be MNRE approved or not. It shall be verified that harmonics are within specified limit for grid tied systems.
6. Solar inverter details and its specifications shall be verified.
7. In the grid System, ensure that there is no back feeding to the grid when grid supply is off and anti islanding protection shall be ensured. Certificate from the manufacturer shall be obtained.
8. The adequacy of cable size for solar PV system shall be verified and ensured.
9. It shall be ensured that energy meter is provided for recording the solar energy generated.
10. It shall be ensured that Bi-directional meter (Net meter) is provided at the interconnection point to record the import and export of energy.
11. Solar panel supporting structures, inverter neutral, body etc. shall be earthed as per standards.
12. Breakers having adequate rating and surge protection device (SPD) shall be provided in the array junction box.
13. It shall be ensured that whether indicating meters are provided in DC and AC DBs .
14. Battery and inverter shall be segregated properly with fire proof partition.
15. If the proposed installation is having a DG set, reverse power relay shall be provided to avoid back feeding to DG set, if necessary.
16. While issuing sanction for energisation for Solar Energy System, following conditions are to

be included in addition to normal conditions.

- a) Consent from licensee shall be obtained (In case of grid tied system).
- b) The whole installation should be in conformity with Central Electricity Authority (Technical Standards for connectivity of the distributed generation resources) Regulations, 2013 and Kerala State Electricity Regulatory Commission (Grid interactive distributed solar energy system) Regulations, 2014.

B. Important extracts of Central Electricity Authority (Technical Standards for connectivity of the distributed generation resources) Regulation, 2013 (For information only)

1. Harmonic current injections from a generating station shall not exceed the limits specified in IEEE 519
2. The distributed generating resource shall not inject direct current greater than 0.5 % of the full rated output at the interconnection point
3. The distributed generating resource shall not introduce flicker beyond the limits specified in IEC 61000
4. The equipment of the generating station shall meet the following requirements.
 - (a) Circuit breakers or other interrupting equipment shall be suitable for their intended application with the capability of interrupting the max available fault current expected at their location.
 - (b) Distributed generation resource and associated equipment shall be designed so that the failure of any single device or component shall not potentially compromise the safety and reliability of the electricity system.
 - (c) Paralleling device of distributed generation resource shall be capable of withstanding 220 % of the nominal voltage at the interconnection point.
5. Every time the generating station is synchronised to the electricity system, it shall not cause voltage fluctuation greater than ± 5 % at the point of connection
6. Provide a manually operated isolating switch between the distributed generation resource and the electricity system which shall meet following requirements.
 - (a) Allow visible verification that separation has been accomplished.
 - (b) Include indicators to clearly show open and closed positions.
 - (c) Be capable of being reached quickly and conveniently 24 hrs a day by licensee's personnel without requiring clearance from the applicant.
 - (d) Be capable of being locked in the open position.
 - (e) May not be rated for load break nor may have features of over current protection
 - (f) Be located at a height of at least 2.44 m above the ground level.
7. The SPD shall be conversant with KSERC (Renewable energy and net metering regulation) 2020& its First amendment in 2022 as amended from time to time. The SPD shall comply with the above regulation for implementing the solar project.

C. Important extracts of Kerala State Electricity Regulatory Commission (Grid interactive distributed solar energy system) Regulation, 2014 (For information only)

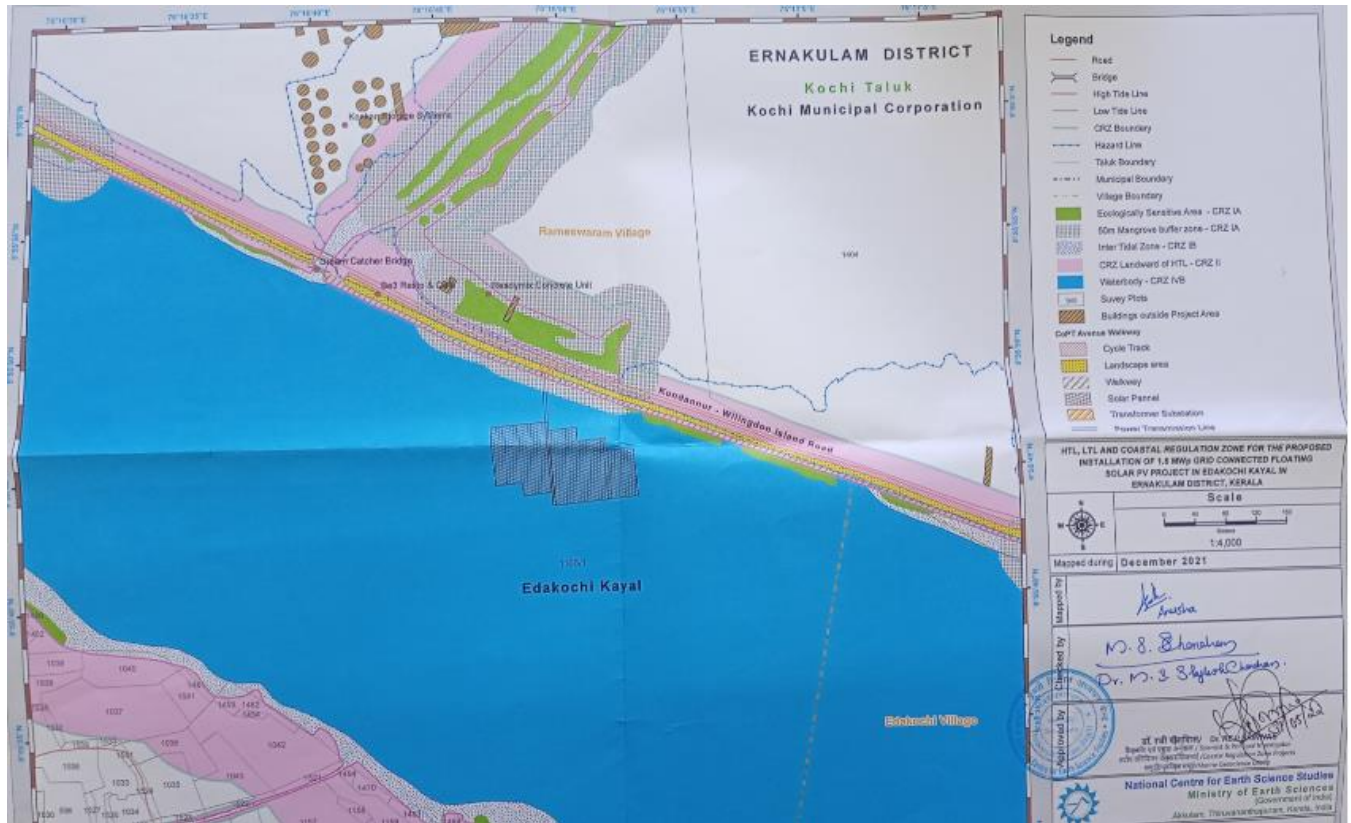
- 4(2)(c) The solar energy system installed by the consumer shall be connected with interlocking system and operated safely in parallel with the distribution system of the licensee.
- 8(b) The interconnection of the solar energy system with the distribution system of the licensee conforms to the relevant provisions of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2023
- 8(c) The net meter and solar meter installed conform to the standards, specifications and accuracy class as provided in the Central Electricity Authority (Installation & Operation of Meters) Regulation, 2006. Smart meters with Make and Model approved by CoPA shall be used for this purpose.
- 9(1) The net meter shall be installed at the interconnection point at CoPA
- 9(2) Solar meter shall be installed at the delivery point of the solar energy system to measure the solar electricity generated.
- 9(4) The meters shall be tested, installed and sealed.
- 11 The eligible consumer shall comply with the specifications and standards and install grid - tied inverter, manually operated isolating switch and associated equipment with sufficient safe guards to prevent injection of electricity from his solar energy system to the distribution system of the licensee when the distribution system is de-energised.
- 13(12)
- a. PV Module: Irradiance measurement, angle of inclination, temperature of the PV module and VI characteristics using PV Array Tester.
 - b. Solar Inverter: Efficiency, input voltage, output voltage, power, THD, DC injection flicker etc. and anti-islanding protection.

Sd/-

Location Map-1



CRZ Map



Location Map-2

