



# THE STATE FISHERIES DEVELOPMENT CORP. LTD.

(An ISO 9001:2015 Certified Govt. Undertaking )

Bikash Bhawan, Bidhannagar, Kolkata - 700091

Ph No. : 033 2358 3123, Tele Fax No. : 033 2337 6470

Email: sfdcltd@yahoo.co.in / sfdcltd66@gmail.com, Website: www.wbsfdc.com



## **e-Tender Notice No. SFDC/MD/NIT- 07(e)/2024-25 (2nd Call)**

**Memo No: 1000/Const-185/2023, Pt-IV**

**Date: 04/12/2024**

The Managing Director, The State Fisheries Development Corporation Limited invites e-tender for the work detailed in the table below. (Submission of Bid through **online**)

Sl. No.	Name of work	Estimated Amount	Earnest Money	Period of completion	Eligibility of Bidder
		(In Rs.)	(In Rs.)		
1	Supplying, Delivery, Installation of Grid Connected Roof Top Solar Photovoltaic Power Plant of cumulative array capacity of 315 KWP within the Premises of Deshapran Fishing Harbour, Dist. - Purba Medinipur.	Rs. 2,40,78,829.00	@ 2% of estimated amount i.e. Rs. 4,81,577.00	180 (One hundred eighty) days	Bonafide outsider resourceful & reliable agencies (reference Serial No. 5 of this e-NIT).

**N.B.:- The successful L1 Bidder shall have to pay the fees of requisite set of tender documents for execution of formal agreement.**

- Both Technical document and Financial Bid are to be submitted in technical (Statutory & Non- Statutory) and financial folder concurrently duly digitally signed in the website <http://wbtenders.gov.in>.
- Necessary Earnest Money will be deposited by the bidder electronically: online – through his net banking enabled bank account, maintained at any bank or: offline – through any bank by generating NEFT/ RTGS challan from the e-tendering portal. Intending Bidder will get the Beneficiary details from e-tender portal with the help of Digital Signature Certificate and may transfer the EMD from their respective Bank as per the Beneficiary Name & Account No., Amount, Beneficiary Bank name(ICICI Bank) & IFSC Code and e-Proc Ref No. Intending bidder who wants to transfer EMD through NEFT/RTGS must read the instruction of the Challan generated from E-Procurement site (i.e Unique transaction receipt) & must be uploaded in the EMD folder of Statuary Bid Document. Bidders are also advised to submit EMD of their bid, at least 3 working days before the bid submission closing date as it requires time for processing of Payment of EMD. Bidders eligible for exemption of EMD as per Govt. rule may avail the same and necessary documents regarding the exemption of EMD must be uploaded in the EMD folder of Statuary bid documents.
- The Technical document and Financial Bid submitted online only.
- The FINANCIAL OFFER of the prospective tenderer will be considered only if the TECHNICAL Document of the tenderer found qualified by the Managing Director, The State Fisheries Development Corporation Limited. The decision of the Managing Director, The State Fisheries Development Corporation Limited will be final and absolute in this respect. The both list of Qualified Bidders will be displayed in the website and also in the Notice Board of the office of the Managing Director, The State Fisheries Development Corporation Limited, on the scheduled date and time.

## 5. Eligibility criteria for participation in the tender.

- i) The intending tenderers should produce credentials of a similar nature of completed work (Grid connected Solar PV Power Plant) as a prime agency of the minimum value of 30% (thirty percent) of the estimated amount put to tender during 5 (five) years prior to the date of issue of the tender notice; or,
- ii) The intending tenderers should produce credentials of 2 (two) similar nature of completed work (Grid connected Solar PV Power Plant) as a prime agency, each of the minimum value of 25% (twenty five percent) of the estimated amount put to tender during 5 (five) years prior to the date of issue of the tender notice; or,
- iii) The intending tenderers should produce credentials of one single running work (Grid connected Solar PV Power Plant) of similar nature as a prime agency which has been completed to the extent of 75% (seventy five percent) or more & value of which is not less than desired value at (i) above;

In case of running works, only those tenderers who will submit the certificate of satisfactory running work from the concerned Executive Engineer, or Equivalent competent authority will be eligible for the tender, in the required certificate it should be clearly stated that the work is in progress satisfactorily & that no penal action has been initiated against the executed agency i.e. the tenderer.

The prospective tenderers must have sufficient credential to participate in the Tender as per Notification bearing No. 04-A/PW/O/10C-02/14 dated 18.03.2015 of Accounts Branch, PWD, Govt. of W.B. [Non Statutory Documents]( if applicable).

### ELECTRICAL CREDENTIAL

N.B.- Completion certificate should contain a) Name of work, (b) Name of Client, (c) Amount put to tender, (d) Schedule month and year of commencement and completion as per work order (e) actual month and year of completion.

**Completion Certificate along with Work Order must be uploaded. Otherwise tender will be treated as non qualified.**

- iv) Bidders have their own office/branch office within West Bengal.
- v) Payment certificate will not be treated as credential.
- vi) Credential certificate issued by the Executive Engineer or equivalent or competent authority of a state / Central Govt., State / Central Govt. undertaking, Statutory / Autonomous Bodies Constituted under the Central / State Statute, on the executed value of completed / running work will be taken as credential.
- vii) The prospective bidders shall have in their full time engagement experienced technical personnel, the minimum being **one Degree holder Electrical or one Diploma holder Electrical** (Authenticated documents in respect of qualification and engagement shall be furnished for Technical Evaluation), failing which the bid may be treated as non responsive[Non statutory Documents].
- viii) A Bank Solvency Certificate not be less than 10% (Ten percent) of the amount put to tender with Proper & authentic documents to be submitted through e-filing. Evidence of access to or availability of credit facilities should be certified by the any commercial Bank [Non statutory Documents].

**Available Bid capacity to be calculated on the basis prescribed Format as illustrated in Annexure – A attached at Section A (Kindly note that this Annexure – A must be submitted duly signed & sealed by the applicant / bidder & authenticated by Statutory Auditor's Firm failing which this application / bid will be rejected) The Bid capacity shall not be less than the estimated amount put to tender.**

- ix) Declaration regarding Structure and Organization duly digitally signed by the applicant to be submitted along with application.
- x) In case of Registered Unemployed Engineers' Co-operative Societies and Registered Labour Co-operative Societies, documents of credentials as per Serial No. 5, Page No. 2 of this e-NIT. 'Certificate of Registration' and 'Certificate for Validity of Registration' from the respective Assistant Registrar of Co-operative Societies, Bye Law, PAN Card, Current P. Tax Challan, Valid 15-digit Goods and Services Taxpayer Identification Number (GSTIN) under GST Act '2017, Employees Provident Fund and Employees State Insurance registration number and current challan eligible list of Registered Unemployed Engineers' Co-operative Societies / Registered Labour Co-operative Societies issued by the concerned Assistant Registrar of Co-operative Societies showing the name

of their Society must be documented through e-filing. Also in case of Registered Unemployed Engineers' Co-operative Societies, documents in satisfying the following criteria are required to be documented through e-filing:-

- a) The Society consists of at least 10 (ten) members of which at least 60% should hold Degree or Diploma in any branch in Engineering as per Memo No. 44-A/4M-11/2002 dt. 09.01.2004 of Deputy Secretary-III, P.W.D.. Privilege will be allowed as per G.O. No. 378(9)-A/PW/O/10C- 17/05 dt. 31-05-2005 P.W.D. Accounts Branch by Deputy Secretary-III including necessary documents in support of the statement and along with other supporting papers. (Non-Statutory documents)
- b) Above society shall be allowed to participate the work mentioned in this e-NIT as per G.O.
- xi) **Joint venture will not be allowed** to participate in the above e-NIT.
- xii) Where there is a discrepancy between the unit rate & the line item total resulting from multiplying the unit rate by the quantity, the unit rate quoted shall govern.
- xiii) Prevailing safety norms has to be followed so that LTI (Loss of time due to injury) is zero.
- xiv) The Tender evaluation committee will have sole discretion to decide eligibility of the contractor on the basis of e- filing documents and reserves the right to refuse any explanation to contractors found ineligible after scrutiny.
- xv) A prospective tenderer shall be allowed to participate in the particular work either in the capacity of individual or as a partner of a firm. If found to have applied severally in a single work, all his applications will be rejected for that work without assigning any reason thereof.
- xvi) The partnership firm shall furnish (a) Registration certificate from Register of Firms, (b) The registered partnership deed & the company shall furnish (a) Incorporation Certificate & (b) Article of Association & Memorandum. (Non-Statutory Document).

**6. No mobilization /secured advance shall be allowed.**

7. Agencies shall have to arrange land for erection of Plant & Machineries, storing of materials, labour shed, laboratory etc. at their own cost and responsibility.
8. (a) All materials mention in Bill of Material and require cement, steel etc. are to be procured at his own cost including all Taxes. Quality of material should be maintain as per specification with reliable B.I.S. Code & as mentioned in the structural detail drawing & test certificate should be submitted as per direction of E.I.C. Authenticated evidence for purchase of cement & steel etc. are to be submitted along with the challan & test certificate. In the event of further testing opted by the E.I.C., then such testing from any Govt. approved testing laboratory shall have to be conducted by the agency at their own cost. The quality of materials & specifications of items as per provision of P.W.D. S.O.R. & relevant I.S. Code.

(b) The Prospective bidders shall submit the work program as per schedule time in Bar Chart format. The work program shall be prepared as per working schedule with duly signed by Engineer & shall be considered the actual time.

9. Recovery of 1% (one percent) cess on construction cost in accordance with the buildings and other construction worker's (Regulation of Employment & conditions of service) Act. 1996 will be implemented in this Tender.
10. Arbitration will not be allowed. The Clause No. 25 of 2911 is to be considered as deleted clause vide gazette notification no. 558/SPW-13th December, 2011.
11. Bids shall remain valid for a period not less than 180 (One hundred eighty) days after the dead line date for Financial Bid submission. Bid valid for a shorter period shall be rejected by The Managing Director, as non-responsive.
12. The prospective bidders shall have own the required plant & machinery or arrange through lease hold registered agreement in working condition. The contractor must furnish the documents in support of ownership or lease hold registered agreement & shall have to be submitted through e-filing [Non - Statutory Documents]. The minimum number of machineries is as per Form IV of this NIT.
13. The prospective bidders shall be capable to establish field testing laboratory equipped with requisite instruments and technical staff so that if the work is finally awarded, he may establish such laboratory in the

work site. Test of materials from outside recognized laboratory may be done, if required, at the discretion of the Engineer-in-charge. The cost for such testing will be borne by the agencies.


14. The intending bidders should clearly understand that whatever may be the outcome of the present invitation of bids, no cost of bidding is reimbursable from the department.
15. In case of inadvertent typographical mistake in the bill of quantity, the same will be treated to be corrected as to confirm with the prevailing relevant schedule of rates of PWD / PWD (Electrical) / PWD (Roads)/I&WD for the concerned district or as per Technically sanctioned estimate.
16. No fixed Security Deposit will be allowed.
17. No Price Adjustment in respect of certain construction material (i.e. cement components, steel components etc.) will be considered.
18. Ready Mix Concrete as per specification required for the construction work will be supplied by the agency through his own plant / from any reputed/recognized supplier if required.
19. Running payment for the work may be made on availability of the fund after necessary certification of work along with checking of contractor's bill.
20. Successful bidder (L1) will have to purchase 2 (two) copies of tender documents at usual cost which mentioned in e-NIT from the office of the respective MD, SFDCL.

**21. A :- Important information**

Date & Time schedule

Sl. No.	Particulars	Date & Time
1.	Date of uploading of e-N.I.T. Documents online) (Publishing Date)	<b>06/12/2024 at 6.55 p.m.</b>
2.	Documents download/sell start date (Online)	<b>06/12/2024 at 6.55 p.m.</b>
3.	Documents download/sell end date (Online)	<b>27/12/2024 upto 4.00 p.m.</b>
4.	Date of Pre Bid Meeting with the intending bidders In the office of The Managing Director, The State Fisheries Development Corporation Limited	<b>17/12/2024 at 12.00 p.m.</b>
5.	Bid submission start date (Online)	<b>06/12/2024 at 6.55 p.m.</b>
6.	Bid Submission closing (Online)	<b>27/12/2024 upto 4.00 p.m.</b>
7.	Bid opening date for Technical Proposals (Online)	<b>31/12/2024 at 4.00 p.m.</b>

**22. LOCATION OF CRITICAL EVENT**

**Pre Bid Meeting**   
**And Bid Opening**

Office of the **Managing Director**  
**The State Fisheries Development Corporation Limited**  
**(Conference Room).**  
**Bikash Bhawan, North Block, 1<sup>st</sup> Floor, Salt Lake,**  
**Kol-700091**

23. The Agency will be liable to maintain the work at working portion at the appropriate service level to the satisfaction of the Engineer-in-Charge at his own cost for a period as per prevailing Govt. rule from the date of completion of the work. If any defect/damage is found during the period as mentioned above contractor shall make the same good at his own cost expense to the specification at par with instant

project work. Failure to do so, penal action against the Agency will be imposed by the Department as deem fit. The Agency will have to quote his rate considering the above aspect.

24. All Bidders are requested to present in the 'The State Fisheries Development Corporation Limited.', during opening the financial bid The Managing Director, **The State Fisheries Development Corporation Limited** may call **Open Bid/Sealed Bid** after opening of the said bid to obtain the suitable rate further, if it is required. No objections in this respect will be entertained raised by any Bidder who will present during opening of bid, or from any Bidder who will absent at the time of opening of Financial Bid. No informal tenderer will be entertained in the Bid further.
25. Site of work and necessary drawings may be handed over to the agency phase wise. No claim in this regards will be entertained.
26. **Earnest Money** : Necessary Earnest Money will be deposited by the bidder electronically: online – through his net banking enabled bank account, maintained at any bank or: offline – through any bank by generating NEFT/RTGS challan from the e-tendering portal. Intending Bidder will get the Beneficiary details from e-tender portal with the help of Digital Signature Certificate and may transfer the EMD from their respective Bank as per the Beneficiary Name & Account No., Amount, Beneficiary Bank name(ICICI Bank) & IFSC Code and e-Proc Ref No. Intending bidder who wants to transfer EMD through NEFT/RTGS must read the instruction of the Challan generated from E-Procurement site & must be uploaded in the EMD folder of Statuary Bid Document. Bidders are also advised to submit EMD of their bid, at least 3 working days before the bid submission closing date as it requires time for processing of Payment of EMD. Bidders eligible for exemption of EMD as per Govt. rule may avail the same and necessary documents regarding the exemption of EMD must be uploaded in the EMD folder of Statuary bid documents.  
**Balance earnest money if required will have to be submitted along with submission of Tender documents for formal agreement.**
27. The Bidder, at his own responsibility and risk is encouraged to visit and examine the site of works and its Surroundings and obtain all information's that may be necessary for preparing the Bid and entering into a contract for the work as mentioned in the Notice Inviting Tender, before submitting offer with full satisfaction, the cost of visiting the site shall be at his own expense.
28. The intending Bidders shall clearly understand that whatever may be the outcome of the present invitation of Bids, no cost of Bidding shall be reimbursable by the Department. The Managing Director, The State Fisheries Development Corporation Limited reserves the right to reject any application for purchasing Bid Documents and to accept or reject any offer without assigning any reason whatsoever and is not liable for any cost that might have incurred by any Tenderer at the stage of Bidding.
29. **Prospective applicants are advised to note carefully the minimum qualification criteria as Mentioned in 'Instructions to Bidders' before tendering the bids.**
30. **Conditional / Incomplete tender will not be accepted.**
31. The intending tenderers are required to quote the rate **on line**.
32. Contractor shall have to comply with the provisions of (a) the contract labour (Regulation Abolition) Act. 1970 (b) Apprentice Act. 1961 and (c) minimum wages Act. 1948 of the notification thereof or any other laws relating there to and the rules made and order issued there under from time to time.
33. **Guiding schedule of rates - For building works**: Current Schedule of rates for concerned District P.W.D. with effect from 01.11.2017 for Building, Sanitary & Plumbing works P.W (R) SOR, P.W.D. (Electrical) SOR along with up to date Corrigenda & Addenda.
34. No price preference & other concession as per Order No. 1110-F dated 10.02.2006 will be allowed.
35. During the scrutiny, if it come to the notice to tender inviting authority that the credential or any other paper found incorrect/ manufactured/ fabricated, that bidder would not allowed to participate in the tender and that application will be out rightly rejected without any prejudice. The Managing Director, The

State Fisheries Development Corporation Limited reserves the right to cancel the N.I.T. due to unavoidable circumstances and no claim in this respect will be entertained.

36. In case if there be any objection regarding prequalifying the Agency that should be lodged to The Managing Director, The State Fisheries Development Corporation Limited within 2 (two) days from the date of publication of list of qualified agencies and beyond that time schedule no objection will be entertained by the Screening Committee.
37. Before issuance of the **WORK ORDER**, the tender inviting authority / bid evaluation committee may verify the hard copy of earnest money, the credential and other documents of the lowest tenderer if necessary. After verification if it is found that the documents submitted by the lowest tenderer is either manufactured or false in that case work order will not be issued in favour of the said Tenderer under any circumstances.
38. If any discrepancy arises between two similar clauses on different notification, the clause as stated in later notification will supersede former one in following sequence.
  - i) Form No. 2911
  - ii) e-NIT
  - iii) Special terms & conditions.
  - iv) Technical Bid.
  - v) Financial Bid
39. The prospective tenderers or any of their constituent partner shall neither have abandoned any work nor any of their contract have been rescinded during the last 3 (three) years. Such abandonment or rescission will be considered as disqualification towards eligibility.

**40. Qualification criteria.**

The tender inviting & Accepting Authority will determine the eligibility of each bidder, the bidders shall have to meet all the minimum regarding.

- a) **Financial Capacity.**
- b) **Technical Capability comprising of personnel & equipment capability.**
- c) **Experience/Credential**

The eligibility of a bidder will be ascertained on the basis of the digitally signed documents in support of the minimum criteria as mentioned in a, b, c above. If any document submitted by a bidder is either manufacture or false, in such cases the eligibility of the bidder/ tenderer will be out rightly rejected at any stage without any prejudice.

41. Where an individual person holds a digital certificate in his own name duly issued to him by the company or the firm of which he happens to be a director or partner, such individual person, either belonging to an appropriate cadre officer of the company or an authorized partner of a firm, having a registered power of attorney empowered by the board or by the firm, shall invariably upload a copy of registered power of attorney showing clear authorization in his favour, to upload such tender. The power of attorney shall have to be registered to accordance with the provisions of the Registration Act, 1908.
42. The bidder should submit necessary labour license from the competent authority under contract labour (Regulation & Abolition) Act '1970.
43. No child labour will be allowed at the working site.
44. The prospective bidder to arrange sufficient construction materials & mechanical equipment's to ensure compliance with his obligations under the contract.
45. All the EMD/Tender Fees in respect of e-Tender will mandatorily be received and refund/settlement made as per Finance Department, Govt. of West Bengal vide No. 3975-F(Y) dated 28<sup>th</sup> July '2016.
46. Rate should be quoted including all duties, taxes & other levies Educational Cess etc. as imposed by Govt. of India & Govt. of West Bengal valid on date of bidding, payable by the Contractor under the Contract, or for any other cause. **The Managing Director, The State Fisheries Development Corporation Limited** will

not make any payments towards taxes, duties, levies etc. for the entire contract period. 70% Payment of materials may be claimed by the agency after supply, delivery & satisfactory inspection by Engineer-in-charge and rest 30% payment will be done after installation, testing and commissioning.

47. Bidder shall submit copy of :-

- (i) Valid PAN issued by the IT Deptt. Govt. of India & I.T Return for last 05 (five) years.
- (ii) Valid 15-digit Goods and Services Taxpayer Identification Number (GSTIN) under GST Act '2017.
- (iii) Tax invoice(s) needs by the supplier for raising claim under the contract showing separately the tax charged in accordance with the provisions of GST Act '2017.
- (iv) Employees' Provident Fund and Employees State Insurance registration number and current challan.

48. Prospective Bidder shall have to execute the work in such manner so that appropriate service level of the Building under improvement is to be maintained during progress of the work and during **Defect Liability Period** of three months or one year or three years or five years, as the case may be (depending upon the nature of the work as described in the explanation appended hereto) hereinafter referred to as the **Defect Liability Period** and 5 (five) years defect Liability Period for Roof treatment works, from the actual date of completion as per Notification No. **5784- PW/L&A/2M-175/2017 dated 12/09/2017** of PWD, Govt. of West Bengal. If any defect/ damage is detected during this period as mentioned above the contractor shall make the same good at his own expense to the satisfaction of the of the Engineer in Charge or in default the Engineer in Charge may cause the same to be made good by other agency and deduct the cost (of which the certificate of the Engineer in Charge shall be final) from his security deposit or any sums that may be then, or at any time thereafter become due to the contractor. Security Deposit shall become payable only after expiry of the Defect Liability Period after making necessary deduction if applicable. Hence condition of refund of Security Deposit will be as per Notification No. 5784- PW/L&A/2M-175/2017 dated 12/09/2017 of PWD, Govt. of West Bengal. Provisions in Clause 17 contained in W.B. Form No. 2911 so far as they relate to DLP and refund of security deposit is to be treated as superseded.

49. Supplementary work/ deviation quantity if any should be followed as per Notification No. 6754-PW/L & A/2M-312/2017 dt. 18/12/2017.

Sd/-

**MANAGING DIRECTOR  
THE STATE FISHERIES DEVELOPMENT  
CORPORATION LIMITED**

**Memo No. 1000/Const-185/2023, Pt-IV**

**Dated : 04/12/2024**

Copy forwarded for favour of kind information to the:-

- 1) The Secretary to the Govt. of West Bengal, Fisheries Department,
- 2) The Managing Director, BENFISH,
- 3) The PS to Hon'ble MOS, Fisheries Department,
- 4) Guard file

Sd/-

**MANAGING DIRECTOR  
THE STATE FISHERIES DEVELOPMENT  
CORPORATION LIMITED**

SECTION A  
**INSTRUCTION TO BIDDERS**

*1. General guidance for e-Tendering*

Instructions/ Guidelines for tenderers for electronic submission of the tenders online have been annexed for assisting the contractors to participate in e-Tendering.

1. Registration of Contractor

Any contractor willing to take part in the process of e-Tendering will have to be enrolled & registered with the Government e-Procurement system; through logging on to <https://etender.wb.nic.in> (the web portal of public works department) the contractor is to click on the link for e-Tendering site as given on the web portal.

2. Digital Signature certificate (DSC)

Each contractor is required to obtain Digital Signature Certificate (DSC) for submission of tenders, from the approved service provider of the National Information's Centre(NIC) on payment of requisite amount details are available at the Web Site stated in Clause-2 of Guideline to Bidder DSC is given as a USB e- Token.

3. The contractor can search & download NIT & Tender Documents electronically from computer once he logs on to the website mentioned in Clause 2 using the Digital Signature Certificate. This is the only mode of collection of Tender Documents.

4. Participation in more than one work

A prospective bidder shall be allowed to participate in the job either in the capacity of individual or as a partner of a firm. If found to have applied severally in a single job all his applications will be rejected for that job.

A prospective bidder (including his participation in partnership) shall be allowed to participate in single road /building work as mentioned in the list of schemes.

5. Submission of Tenders.

General process of submission, Tenders are to be submitted through online to the website stated in Cl. 2 in two folders at a time for each work, one in Technical Proposal & the other is Financial Proposal before the prescribed date & time using the Digital Signature Certificate (DSC) the documents are to be uploaded virus protected scanned copy duly Digitally Signed. The documents will get encrypted (transformed into non readable formats).

*A. Technical proposal*

The Technical proposal should contain scanned copies of the following further two covers (folders).

**A-1. Statutory Cover Containing**

(i) Prequalification Application (Sec-B, Form- I).

(ii) Tender Form No. 2911 & NIT (download properly and upload the same digitally Signed).

iii) SPECIAL TERMS AND CONDITIONS\_DECLARATION BY THE TENDERER\_EXPERIENCE PROFILE.

**A-2. Non statutory Cover Containing**

i) PAN Card, Current P.Tax Challan, Current IT Return for last 5 (five) years, Trade License, Valid 15-digit Goods and Services Taxpayer Identification Number (GSTIN) under GST Act '2017, Tax invoice(s) needs by the supplier for raising claim under the contract showing separately the tax charged in



accordance with the provisions of GST Act '2017, Employees Provident Fund and Employees State Insurance registration number and current challan.

- ii. Registration Certificate under Company Act. (if any).
- iii. Registered Deed of partnership Firm/ Article of Association and Memorandum.
- iv. Registered Power of Attorney (For Partnership Firm/ Private Limited Company, if any).
- v. Balance Sheet and Profit and Loss A/c for the last five years (year just preceding the current Financial Year will be considered as year – I).
- vi. Employees Provident Fund and Employees State Insurance registration number and current challan.
- vii. Clearance Certificate for the Current Year issued by the Assistant Register of Co-Op(S) (ARCS) bye laws are to be submitted by the Registered Labour Co-Op(S) Engineers' Co.-Opt.(S).
- viii. List of machineries possessed by own / arrange through lease hold agreement along with authenticated copy of invoice & challan. (Section –B, Form IV).
- ix. List of technical staff along with structure and organization (Section – B, Form – III).
- x. Credential as per Serial No. 5, Page No. 2 of this e-NIT. To be furnished (Section – B, Form – V).
- xi. Bank solvency certificate to be furnished (Section – B, Form – VII).

Note:- The eligibility of a bidder will be ascertained on the basis of scanned copy of all original documents duly digitally signed as stated in A-1 & A-2. Failure of submission of any of the above mentioned documents (as stated in A1 and A2) will render the tender liable to summarily rejected for both statutory & non statutory cover.

***B. Financial proposal***

- i. The financial proposal should contain the following documents in one cover (folder) i.e. Bill of quantities (BOQ) the contractor is to quote the rate (percentage above/ below/ at par) online through computer in the space marked for quoting rate in the BOQ.
- ii. Only downloaded copies of the above documents are to be uploaded virus scanned and Digitally Signed by the contractor.
- iii. Financial capacity of a tenderer will be judged on the basis of working capital and available bid capacity as mentioned in the e-N.I.T. If an applicant feels that his/their Working Capital beyond own resource may be insufficient, he/they may include with the application a letter of guarantee issued by a first class Bank to supplement the applicant. This letter of guarantee should be addressed to the Tender Inviting/ Accepting Authority and should guarantee duly specifying the name of the project that in case of contract is awarded to the Tenderer, the Tenderer will be provided with a revolving line of credit. Such revolving line of credit should be maintained until the works are taken over by the Engineer-In-Charge/ Employer. The audited Balance sheet for the last five years, net worth bid capacity etc. are to be submitted which must demonstrate the soundness of Tenderer's financial position, showing long term profitability including an estimated financial projection of the next two years.
- iv. As per G.O. No. 4608-F(Y) dated 18.07.2018 of Finance Department, Govt. of West Bengal, Additional Performance Security @ 10% (Ten Percent) of the tendered amount shall be obtained from the successful bidder if the accepted bid value is 80% (Eighty percent) or less of the Estimated amount put to tender.

The Additional Performance Security shall be submitted in the form of Bank Guarantee from any Scheduled Bank before issuance of the Work Order.

The Bank Guarantee shall have to be valid upto end of the Contract Period & shall be renewed accordingly, if required.

Necessary provisions regarding deduction of security deposit from the progressive bills of the contractor as per relevant clauses of the contract shall in no way be altered / affected by provision of this Additional Performance Security.

**6. Penalty for suppression / distortion of facts**

Submission of false document by tenderer is strictly prohibited and in case of such act by the tenderer the same may be referred to the appropriate authority for prosecution as per relevant IT Act with forfeiture of earnest money forthwith.

**7. REJECTION OF BID**

**The Employer (tender accepting authority / bid evaluation committee) reserves the right to accept or reject any Bid and to cancel the Bidding processes and reject all Bids at any time prior to the award of Contract without thereby incurring any liability to the affected Tenderer or Tenderers or any obligation to inform the affected Tenderer or Tenderers of the ground for Employer's (tender accepting authority) action.**

The Tenderer whose Bid has been accepted will be notified by the Tender Inviting and Accepting Authority through acceptance letter/ Letter of Acceptance

The Letter of Acceptance will constitute the formation of the Contract.

The Agreement in Printed Tender Form in WBF No. 2911 will incorporate all necessary documents e.g. N.I.T., all addenda corrigendum, special terms and condition (Section –C), different filled-up forms (Section –B), B.O.Q. and the same will be executed between the Tender Accepting Authority and the successful Tenderer.

**Sd/-  
The Managing Director  
The State Fisheries Development  
Corporation Limited**

**THE ABOVE STATED NON-STATUTORY/TECHNICAL DOCUMENTS SHOULD BE ARRANGE IN THE FOLLOWING MANNER**

Click the check boxes beside the necessary documents in the My Document list and then click the tab “Submit Non Statutory Documents’ to send the selected documents to Non-Statutory folder. Next Click the tab “Click to Encrypt and upload” and then click the “Technical” Folder to upload the Technical Documents.

Sl. No.	Category Name	Sub Category Description	Details
A.	CERTIFICATES	CERTIFICATES	<ol style="list-style-type: none"> <li>Valid 15-digit Goods and Services Taxpayer Identification Number (GSTIN) under GST Act '2017.</li> <li>Tax invoice(s) needs by the supplier for raising claim under the contract showing separately the tax charged in accordance with the provisions of GST Act '2017.</li> <li>PAN Card, Current P.Tax Challan.</li> <li>Current IT return [last 5 (five)years]</li> <li>Current Trade License</li> <li>Employees Provident Fund and Employees State Insurance registration number.</li> </ol>
B.	Company Details	Company Details – I	<ol style="list-style-type: none"> <li>Society (Society Registration copy, Trade License).</li> <li>Power of attorney.</li> <li>Partnership Firm (Partnership Deed, Trade License).</li> <li>Bye Law.</li> <li>Eligible list of Registered Unemployed Engineers Co-operative Society /Registered Labour Co-operative Society.</li> <li>Current Audit Report.</li> <li>Current N.O.C. from A.R.C.S.</li> <li>Minutes of last A.G.M.</li> </ol>
C.	Credential	Credential 1	<ol style="list-style-type: none"> <li>Similar nature of Govt., work done as a Prime Agency &amp; completion certificate which is applicable for eligibility in this tender.(ref. Serial no-5 of this e-NIT)</li> </ol>
D.	Man Power, Machineries	Technical Personnel, Machineries	List of Technical Staffs along with Structures & Organization (As per e-NIT), & Section-B (Form-IV).
E	Financial Information	Work in Hand	<ol style="list-style-type: none"> <li>Affidavits – X &amp; Affidavits – Y (Section – B)</li> <li>Certificate of revolving line of credit by the Bank.</li> <li>Annexure-A</li> </ol>
		Profit & Loss A/c. & Balance Sheet for last 5 (five) years	Profit & Loss A/c. & Balance Sheet.

**Note:- Scan copy of all original documents stated above shall be uploaded duly signed by the bidder.**

- A. Tender evaluation by The Managing Director, The State Fisheries Development Corporation Limited**
- Opening of Technical proposal :- Technical proposals will be opened by Bid evaluation Committee constituted by The Managing Director, The State Fisheries Development Corporation Limited, and his authorized representative electronically from the web site stated using their Digital Signature Certificate.
  - Intending tenderers may remain present if they so desire.
  - Cover (folder) statutory documents (vide Cl. No. 5.A-1 of Section “A”) should be open first & if found in order, cover (Folder) for non-statutory documents (vide Cl. No. – 5.A-2 of Section “A”) will be opened. If there is any

deficiency in the statutory documents the tender will summarily be rejected.

- iv. Decrypted (transformed in to readable formats) documents of the non statutory cover will be downloaded & handed over to the Managing Director, The State Fisheries Development Corporation Limited.
- v. Uploading of summary list of technically qualified tenderers.
- vi. Pursuant to scrutiny & decision of the Bid evaluation committee constituted by The Managing Director, The State Fisheries Development Corporation Limited the summary list of eligible tenders & the serial number of work for which their proposal will be considered will be uploaded in the web portals.
- vii. While evaluation by Bid evaluation committee constituted by The Managing Director, The State Fisheries Development Corporation Limited may summon of the tenders & seek clarification / information or additional documents or original hard copy of any of the documents already submitted & if these are not produced within the stipulated time frame, their proposals will be liable for rejection.
- viii. **Opening & evaluation of Tender :-**

If any contractor is exempted from payment of EMD, copy of relevant Government Order needs to be furnished.

#### **B. Financial proposal**

- i) The financial proposal should contain the following documents in one cover (folder) i.e. Bill of quantities (BOQ) the contractor is to quote the rate (Presenting Above/ Below/ At per) online through computer in the space marked for quoting rate in the BOQ.
  - ii) Only downloaded copies of the above documents are to be uploaded virus scanned & Digitally Signed by the contractor.
6. Penalty for suppression / distortion of facts  
If any tenderer fails to produce the original hard copies of the documents (especially Completion Certificates and audited balance sheets), or any other documents on demand of **The Managing Director, The State Fisheries Development Corporation Limited** within a specified time frame or if any deviation is detected in the hard copies from the uploaded soft copies or if there is any suppression, the tenderer will be suspended from participating in the tenders on e-Tender platform for a 3 (Three) years. In addition, his user ID will be deactivated and Earnest Money Deposit will stand forfeited. Besides, the P.W. Directorate may take appropriate legal action against such defaulting tenderer.

The Employer reserves the right to accept or reject any Bid and to cancel the Bidding processes and reject all Bids at any time the prior to the award of Contract without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the ground for Employer's action.

#### **7. AWARD OF CONTRACT**

The Bidder whose Bid has been accepted will be notified by the Tender Inviting & Accepting Authority through acceptance letter.

The notification of award will constitute the formation of the Contract.

The Agreement in W.B.F.No.-2911 will incorporate all agreements between the Tender Accepting Authority and the successful Bidder.

**Sd/-**  
**The Managing Director**  
**The State Fisheries Development**  
**Corporation Limited**

## Form - II A

Information of audited financial statements for the last year to demonstrate the current soundness of the Bidder's financial position :

1. The Bidder's Net worth for the last year calculated on the basis of capital, profit & free reserve available to the firm should be positive.
2. Bidders, who meet the minimum qualification criteria, will be qualified only if their available bid capacity at the expected time of bidding is more than the total estimated cost of the works. The available bid capacity will be calculated as under:

Assessed Available Bid Capacity = (A x N x 2 - B) where

A = Maximum value of engineering works in respect of projects executed in any one year during the last 5 (five) years (updated to the price level of the year indicated in table below under note) taking into account the completed as well as works in progress. The projects include turnkey project / item rate contract / construction works.

N = Number of years (i.e. \_\_\_\_\_ year) prescribed for completion of the works for which Bids are invited.

B= Financial Liability of the bidder to be incurred for existing commitments & on-going works during the period of the subject contract.

### To calculate the value of 'A'

- i) A table containing value of Engineering Works in respect to Projects (Turnkey projects/item rate contract/construction works) undertaken by the bidder during the last 5 (five) years is as follows :

Sl. No.	Year	Value of Engineering Works undertaken w.r.t. Projects (Rs. In Crores)
1	Year - 5	
2	Year - 4	
3	Year - 3	
4	Year - 2	
5	Year - 1	

- ii) Maximum value of projects that have been undertaken during the F.Y. \_\_\_\_\_ out of the last 5 years & value thereof is Rs. \_\_\_\_\_ Crores. (Rupees \_\_\_\_\_). Further, value updated to the price level of the year indicated in Table is as follows:

Rs. \_\_\_\_\_ Crores x \_\_\_\_\_ (Updation Factor as per Table annexed)

Rs. \_\_\_\_\_ Crores (Rupees \_\_\_\_\_).

Table indicating the factory for the year for updation to the price level is indicated as under

Sl. No.	F.Y. / Calendar year	Updation factor
1	Year - 1	1.0
2	Year - 2	1.05
3	Year - 3	1.10
4	Year - 4	1.15
5	Year - 5	1.20

- iii) Net worth for the last year of \_\_\_\_\_ (name of the company)

<p>.....</p> <p>.....</p> <p>Name of the Statutory Auditor's</p> <p>Firm/Chartered Accountant</p> <p>Signature:-</p> <p>Seal of the Audit/Chartered Accountant Firm:</p> <p>Name of signatory (in capital) :</p> <p>Membership No.:-</p>
--

.....  
.....  
Signature:  
Name:  
  
Designation of Authorized Signatory  
  
For & on behalf of  
..... (Name of the Applicant)

Firm Regn. No:-  
Date of Birth :-  
Mob:-  
UDIN :-

Note :

1. All the documents to be submitted in support of Annexure – P must be duly signed & sealed by the applicant / bidder & authenticated by Statutory Auditor's firm.
- ~~2. In case of a Joint Venture, Lead Member of such joint venture shall be required to meet 60% of required Bid Capacity & each of the Joint Venture Members shall be required to meet atleast 30% of requirement of BID Capacity. Bid capacity of all members in total should be atleast 100% of required Bid capacity (Joint Venture is not allowed in this e-NIT).~~

SECTION – B  
FORM –I  
**PRE-QUALIFICATION APPLICATION**

**To**  
**The Managing Director**  
**The State Fisheries Development**  
**Corporation Limited**

Ref: - Tender for \_\_\_\_\_  
\_\_\_\_\_ (Name of work) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**e-N.I.T.NO- SFDC/MD/NIT- (e)/ 2024-25 (2nd Call) of The Managing Director, The State Fisheries Development Corporation Limited**

Dear Sir,

Having examined the Statutory, Non statutory and e-NIT documents, I /we hereby submit all the necessary information and relevant documents for evaluation. The application is made by me / us on behalf of .....In the capacity \_\_\_\_\_duly authorized to submit the order.

The necessary evidence admissible by law in respect of authority assigned to us on behalf of the group of firms for Application and for completion of the contract documents is attached herewith.

We are interested in bidding for the work(s) given in Enclosure to this letter.

We understand that :

- (a) Tender Inviting and Accepting Authority/Engineer-in-Charge can amend the scope and value of the contract bid under this project.
- (b) Tender Inviting and Accepting Authority/Engineer-in-Charge reserves the right to reject any application without assigning any reason.

**Encl:- e-Filling:-**

- 1. Statutory Documents
- 2. Non Statutory Documents

Signed by an authorized officer of the firm

\_\_\_\_\_  
Title of the officer  
\_\_\_\_\_

\_\_\_\_\_  
Name of the Firm with Seal

Date

**N.B. THIS APPLICATION MUST BE MADE IN THE LETTER HEADED PAD OF THE FIRM IN WHICH APPLICATION IS MADE, CLEARLY MENTIONING THE ADDRESS AND CONTACT NUMBER & email ID OF THE FIRM.**

**SECTION – ‘B’  
AFFIDAVIT – “X”  
(To be furnished in Non – Judicial Stamp paper  
of appropriate value duly notarized on after the date of publication of this e-NIT)**

Work in progress				Work order issued but work not started		
Sl. No.	Name of the work with Tender No.	Estimated Amount	% of work executed	Sl. No.	Name of the work with Tender No.	Tendered Amount

Signed by an authorized officer of the firm

\_\_\_\_\_

—

Title of the officer

\_\_\_\_\_

—

Name of the Firm with Seal

Date \_\_\_\_\_



**SECTION – ‘B’  
AFFIDAVIT – “Y”  
(To be furnished in Non – Judicial Stamp paper  
of appropriate value duly notarized)**

1. I, the under-signed do certify that all the statements made in the attached documents are true and correct. In case of any information submitted proved to be false or concealed, the application may be rejected and no objection/claim will be raised by the under-signed.
2. The under-signed also hereby certifies that neither our firm M/S \_\_\_\_\_ nor any of constituent partner had been debarred to participate in tender for Govt. works during the last 5 (five) years prior to the date of this e-NIT.
3. The under-signed would authorize and request any Bank, person, Firm or Corporation to furnish pertinent information as deemed necessary and/or as requested by the Department to verify this statement.
4. The undersigned understands that further qualifying information may be requested and agrees to furnish any such information at the request of The Department.
5. Certified that I have applied in the tender in the capacity of individual/as a partner of a firm and I have not applied severally for the same work.
6. Certify that the rates have been offered by carrying out & completing the work to the satisfaction by the Department by taking due consideration of all factors after inspection of the work site & going through the detailed Notice Inviting e-Tender & Schedule of probable items of work with approximate quantities & other documents.

\_\_\_\_\_  
Signed by an authorized officer of the firm

\_\_\_\_\_  
Title of the officer

\_\_\_\_\_  
Name of the Firm with Seal

Date \_\_\_\_\_

**SECTION - B**  
**FORM- III**  
**STRUCTURE AND ORGANISATION**

**A.1** Name of applicant :  
**A.2** Office Address :  
Telephone No. and Cell Phone No. :  
Fax No. :  
E mail ID :  
**A.3** Attach an organization chart showing the structure of the company with names of Key personnel and technical staff with Bio-data. :  
**A.4** PAN No. :  
**A.5** G.S.T. No. :  
**A.6** Details of Bank Accounts :-  
i) Name of Bank :  
ii) Name of Branch & Addressed with Phone No. :  
iii) Account No. :  
iv) MICR No. :  
v) IFSC Code No. :

---

**Note:** Application covers Proprietary Firm, Partnership, Limited Company or Corporation.

\_\_\_\_\_  
Signed by an authorized officer of the firm

\_\_\_\_\_  
Title of the officer

\_\_\_\_\_  
Name of the Firm with Seal

Date \_\_\_\_\_

**FORM- III B**

[Ref. NIT Clause No. 3.0 (ii)]

(To be furnished in Non- Judicial Stamp paper of appropriate value duly notarized on or after the date of publication of this NIT)

List of Technical Personnel to be full time engaged/ appointed for the work “ \_\_\_\_\_ ”

\_\_\_\_\_ (Name of work) \_\_\_\_\_ ”

Sl. No.	Name of Technical Personnel	Qualification	Designation	Date of Joining	Remarks

I on behalf of (bidders name) do hereby declare that the above information furnished by me are true to the best of knowledge and belief and shall be responsible if any information is found incorrect in due course and the Department has got all right to take any action as deems fit.

Witness : \_\_\_\_\_

\_\_\_\_\_  
Signed by an authorized officer of the firm

-----  
Title of the officer

-----  
Name of the Firm with seal

Date \_\_\_\_\_

\_\_\_\_\_  
Signature of Notary

**SECTION - B**

**FORM – IV**

**C. DEPLOYMENT OF MACHINERIES (in favour of owner / lessee):-**

(Original document of own possession arranged through lease deed to be annexed)

(If engaged before Certificate from E.I.C. to be annexed in respect of anticipated dated of release of Machineries.)

Name of Machine / Instrument	Make	Type	Capacity	Motor / Engine No.	Machine No.	Possession Status		Date of release If Engaged
						Idle	Engaged	
1	2	3	4	5	6	7	8	9
Insulation Tester			500V or 1KV, 2KVMegger		1			

Signed by an authorized officer of the firm

\_\_\_\_\_  
Title of the officer

\_\_\_\_\_  
Name of the Firm with Seal

Date \_\_\_\_\_

**SECTION – B FORM – IV (contd...)**

**G. CONTRACTOR'S EQUIPMENT:**

MINIMUM PLANT AND EQUIPMENT TO BE DEPLOYED BY THE CONTRACTOR FOR THE WORK. Whereas it is entirely the responsibility of the Contractor to deploy sufficient plant and mechanical equipment to ensure compliance with his obligations under the Contract, the following list is an indicative list of the minimum essential basic holding of plant and mechanical equipment which should be owned or arranged through lease hold agreement by the bidders. Initially maximum age of the plants, machineries will be 5 years as on the date of publication of NIT. It may be extended up to 7 years after getting fit certificate from the manufacturer and this certificate should be produced at the time of submission of Bid.

All other machineries and equipments should be in running condition.

All plants, machineries and equipments will be verified by the Department before execution of the work.

SL. NO.	TYPE OF EQUIPMENT	NUMBER REQUIRED
1	Insulation Tester (500V or 1KV, 2KV Megger)	1
2	Earth Megger	2
3	Digital Multi – Meter	1
4	Alco Meter	1
5	Drilling Machine & Welding Machine etc. required for Electro – Mechanical works.	1
6	Crimping Machine	1

**Signature of applicant including title  
and capacity in which application is made**

SECTION-B

FORM-V

EXPERIENCE PROFILE

**LIST OF WORKS COMPLETED WHICH ARE SIMILAR IN NATURE AND EXECUTED & RUNNING WORKS DURING THE LAST FIVE YEARS AS PER CLAUSE 5 OF THIS e-NIT.**

Name of Employer	Name, Location & nature of work	Contract price in Indian Rs.	Value completed & certified in Indian Rs.	Original date of start of work	Original date of completion of work	Actual date of starting the work	Actual date of completion the work	Reasons for delay in completion (if any)

Note : a) Certificate from the Employers to be attached.

Signed by an authorized officer of the firm

\_\_\_\_\_ Title of the officer

\_\_\_\_\_ Name of the Firm with Seal

Date \_\_\_\_\_

SECTION-B

FORM-VII

**Bank Solvency Certificate**

This is to certify that .....(name of firm) is a reputed company with a good financial standing.

If the contract for the work, namely “.....”  
 “(As per NIT against Notice Inviting e-Tender No. .... of the **The Managing Director, The State Fisheries Development Corporation Limited** is awarded to the above firm, we shall be able to provide overdraft / credit facilities to the extent of Rs.....  
 (Rupees.....) **only to meet their working capital for executing the above contract during the contract period.**

Signed by an authorized officer of the Bank with seal

Name of the Bank

Address of the Bank

Phone No.

e-Mail ID

Date

**SECTION-B**

**FORM-VI**

**INFORMATION REGARDING CURRENT LITIGATION, DEBARRING/EXPELLING OF TENDERER  
OR ABANDONMENT OF WORK BY TENDERER**

1. a) Is the Applicant currently involved in any litigation : YES / NO  
relating to the contract works.
- b) If yes, give details with reasons :
2. a) Has the Applicant or any of its constituent partners : YES / NO  
been debarred / expelled by any Agency in India,  
during the last 5 (five) years.
- b) If yes, give details with reasons :
3. a) Has the Applicant or any of its constituent : YES / NO  
abandoned / suspended any contract during the,  
last 5 (five) years.
- b) If yes, give details with reasons :

---

Note: If any information in this Schedule is found to be incorrect or concealed, pre-qualification application will be summarily rejected.

**Signature of applicant including title &  
capacity in which application is made**

## Technical Specification

### Grid -Tied Solar PV Power Plant of Cumulative Array Capacity: 315 kWp

#### **1.0 Outline of the scheme of the project:**

- 1.1 The array capacity of each of the PV Power plant will be as per available shadow free roof at site. The bidder should visit the site before bidding with prior information to the authority.
- 1.2 The PV array will be installed at the available space earmarked at project site (multiple buildings). The MMS have to be installed on the roof of the building, Staircase, etc as per available space to be provided by the authority.
- 1.3 The power from PV array will be feed into grid through a grid tied string inverter 3Ø 415 V 50Hz AC of minimum nominal capacity as per design.
- 1.4 Outputs of the grid-tied string inverter will be terminated to an **Inverter LT Panel** to be located close to the inverter.
- 1.5 The output of the **Inverter LT Panel** will be terminated and connected with supply mains through a **Grid interfacing LT Panel**.
- 1.6 An Energy Meter to be installed at any suitable location at the output of Inverter LT panel and before connected to the mains to measure the energy produce from the PV Power Plant
- 1.7 The AJB, Grid –tied string Inverter, Inverter LT Panel will be installed in suitable kiosk with proper security and protection with arrangement of proper shed (if/as required).
- 1.8 The SPV power plant to be installed should be Robust, Economic, Efficient and Time tested and having a good aesthetic view matched with the Building.
- 1.9 Site wise as built diagram including shadow analysis report to be submitted.
- 1.10 \*NB: The MMS has to be designed especially for the site roof as detailed in technical section.

#### **2.0 Solar PV Modules**

The Cell of the Modules. The capacity will be consider as per declared capacity in the published technical brochures of the proposed PV Module Manufacturer.

Each PV module used in this solar power project must use an RF identification tag. The information must be mentioned in the RFID used on each module as per guideline of MNRE Government of India.

#### **Warranty**

- A. Material Warranty:** The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a period not less than twenty five (25) years from the date of dispatch instruction by FISHERIES DEPT or dispatch from the manufacturers factory, which-ever is later :
- i. Defects and/or failures due to manufacturing
  - ii. Defects and/or failures due to quality of materials
  - iii. Non conformity to specifications due to faulty manufacturing and/or inspection processes.

If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the Owner's sole option. The contractor (till defect liability period) shall be responsible to contact with the contractor if any of the above mentioned cases occurred.

- B. Performance Warranty:** The manufacturer should warrant the output of Solar Module(s) for atleast 90% of its rated power output at the end of initial 10 years and 80% of its rated power at the end of the next 15 years from the date of dispatch instruction by Fisheries or dispatch from the manufacturers factory, which-ever is later. The contractor shall collect the Warranty Certificate for performance of the

modules from the manufacturer and submit the same to FISHERIES DEPT. prior to delivery of the products to the respective sites.

If, Module(s) fail(s) to exhibit such power output in prescribed time span the Contractor/Manufacturer (Contractor within the 5 years Maintenance Period and the Solar PV Module manufacturer for the rest of 20 Years), will be bound to either deliver additional PV Module(s) to replace the missing power output with no change in area of site used or replace the PV Module(s) with no extra cost claimed at Owner's sole option.

Manufacturer of proposed PV modules must have the ISO 9001:2008 or ISO 14001 Certification or any latest certification (if any) for their manufacturing unit for their said manufacturing item.

\*\*Rated Power Output is determined as a standard under the test conditions of cell temperature of 25 degrees Celsius and irradiance of 1000 Watt per Sq. Mtr and Air Mass 1.5 Spectrum.

**Note: Only indigenously manufactured PV modules should be used in Grid Connected Rooftop Solar PV Power Plants under this scheme. However, other imported components can be used, subject to adequate disclosure and compliance to specified quality norms and standards.**

The contractor should submit the warrantee certificate issued by the original PV Module manufacturer to FISHERIES DEPT after delivery of every lot. The warranty certificate as issued by the PV Module manufacturer, must comply the terms of the tender warranty period and other terms of the tender.

**Desired specification of the PV Module will include but not limited to the following:**

Sl No	Item	Description
1.0	Certification	i) IS 14286:2010/IS 16077:2013/IEC 61215 ii) IS/IEC 61730(1,2):2004 iii) IEC 61701:2011 OR EQUIVALENT. iv) IEC 62804-1:2015 (E) OR EQUIVALENT.
1.1	Type Test certificate issuing authority.	NABL/ IEC Accredited Testing Laboratories or MNRE accredited test centers.
2.0	PV Cell	
2.1	Type	Crystalline Silicon
3.0	PV Module	
3.1	Rating at STC	Minimum capacity of each <b>PV Module to be used is 72 cells - 500 Wp</b> (without any negative tolerance).
3.2	Efficiency	Minimum 20 %
3.3	Fill factor	Minimum 70%
3.4	Withstanding voltage	1000V/1500V DC
3.5	Glass	
3.5.1	Thickness	3.2 mm (minimum)
3.5.2	Type	High transmission, low iron, tempered & textured glass.
3.6	Bypass Diode	
3.6.1	System Voltage (V sys)	1000 V DC (minimum)
3.6.2	Number	3 numbers (minimum )
3.7	Module Frame	
3.7.1	Type	Anodized aluminum frame (35 MM [min] vertical frame width)
3.8	<b>Module Junction Box</b>	
3.8.1	Enclosure	IP 67 (min)
3.8.2	MC4 Connector	IP 67 having IEC 62852 certification
3.8.3	Cable	Specified in Cables & Wires Specification.



### 3.0 PV Array

**Desired specification of the PV Array will include but not limited to the following:**

Sl No	Item	Description
1.0	Nominal Capacity	Depending on the design.
2.0	PV Module interconnection connector	MC-4 / Tyco connector. IP 67 having IEC 62852 certification
3.0	PV Module interconnection cable and array cable	PV 1-F standard /NEC standard "USE-2 or RHW-2" type and EN 50618
4.0	PV array String Voltage	Compatible with the MPPT Channel of the inverter
<b>5.0</b>	<b>Maximum Roof Space Utilization</b>	<b>10 Sqm / per kWp for true South</b>

### 4.0 PV Module Mounting Structure

**During Structural design following points must be include but not limited to the following:**

- (i) Anodised Aluminium Section (material test certificate to be submitted)/ Hot dip galvanised MS mounting structure with minimum 5 mm thickness should be used for module mounting / panels / arrays etc. Each structure should have the angle of inclination as per the site condition to obtain optimal isolation level. However to accommodate more capacity, the angle of inclination may be reduced / adjusted until the plant meets the specified optimal performance ratio requirements. Moreover, the decision of the Controlling Officer will be final in this regard.
- (ii) For special type of roof (i.e for corrugated Tin shed or whatever may be), where above cited prevailing process is not suitable or any type of constraints observed (with appropriate documentation of the user organisation), the contractor have to design & supply special type of structure supported by Staad- pro design ,wind loading calculation sheet; duly certified by a Structural Engineer. The decision of the Controlling Officer will be final in this regard.
- (iii) The PV Array should be capable of withstanding a **minimum wind load of 200 km/hr after installation (in that case latest IS 875 part (3) should be followed)**. Standard design considerations i.r.o relevant wind zone may be applied, in line of given parameters/ information / instructions/standards, codes etc., as mentioned here in this tender document. Suitable fastening arrangement, such as grouting and clamping should be provided to ensure & secure the installation against the specific wind speed for the respective wind zone of the location where the PV Power plant to be proposed to be installed. The decision of the Controlling Officer will be final in this regard.
- (iv) All structures including any ancillary metallic parts thereof must be protected against any corrosion and the structures must also be compatible with the materials used in the module frame, fasteners, fixtures, nuts, bolts etc. or any similar nature of metallic components whichever are required to complete the job, in all respect.
- (v) The MS member must be of I.S standard reputed manufacturer and the standard ISI engrave should be visible on the mild steel section member.
- (vi) The array structure shall be designed to allow easy replacement of any module. The array structure is to be so designed that it would occupy minimum space without sacrificing the output of the PV Plant. The design factor of safety should be 1.5 or optimum. The decision of the controlling officer will be final in this regard.
- (vii) While designing, sufficient care is to be taken about the load bearing capacity of the roof and for designing the suitable structure based on the quality of the roof.
- (viii) The Module Mounting structure made of MS as per latest IS: 2062 and galvanization of the mounting structure shall be in compliance of latest IS : 4759.
- (ix) The structural condition of the roof / type of roof / type of roof treatment (if any) should be precisely assessed by the contractor before execution of work and in case of any decision regarding

availability of suitable shadow free and structural sound roof space, the matter is to be taken up with Dept of fisheries in writing. The decision of the Controlling Officer will be final in this regard.

- (x) The contractor shall have to submit the drawing of PV Module mounting structure supported by Staad- pro design ( soft copy of the staad profile to be submitted) , wind loading calculation sheet ; duly certified by a Structural Engineer after placement of LOA for necessary approval. The decision of the Controlling Officer will be final in this regard.
- (xi) Safety of the roof structure should be properly maintained all through the work. If any damages of the building roof structure occurred due to installation by the contractor, necessary rectification is to be made by the contractor immediately at his own risk & cost, mending good all damages & provided its original and good condition.
- (xii) **In case of any damage for MMS and / or PV Module will take place by cyclone or storm, the contractor has to assess the damage within 15 days of such incidence. The contractor has to do necessary repair works within three weeks of such occurrence at its own cost.**

### 5.0 PV Array Junction Box (AJB)

**PV Array Junction Box (AJB) will have to be used for termination of string prior connecting array with inverter.** The desired specification of the PV Array Junction Box and accessories will include but not limited to the following:

Sl No	Item Description	Desired Data
1.0	Enclosure	
1.1	Degree of Protection	IP65 with UV Protected
1.2	Material	Polycarbonate.
1.3	Withstanding voltage	1000V DC (min)
2.0	Cable Entry and Exit connector type	MC 4 / Tyco Connector ( as per suitability of PV Array String cable), IP 65 having IEC 62852 certification OR EQUIVALENT
3.0	Surge Protecting Device (SPD)	
3.1	Type	DC
3.2	Protection class	Type 2
3.3	Rating (8/20)	20 kA
3.4	Number of set	As may be required as per string Design (minimum 1 set against each MPPT Chanel)
4.0	Fuse with fuse holder	
4.1	Position	Positive and negative terminal for each series string
4.2	Type	Glass fuse, for PV Use only
4.3	Rating	Current: Minimum <b>1.25</b> times the rated short circuit current of the series string

### 6.0 Grid –Tied Inverter

The power from PV array is to be feed into grid through grid-tied string inverter. Performance Certificate & Testing/Demonstration will be Guided as per Clause elaborated elsewhere in this tender.

Desired specification of string inverter will include but not limited to the following:

Sl. No.	Operating Parameter	Desired specification
1.0	Type	Grid - tied String Inverter
2.0	Usage	Specially used for PV system
3.0	Standards	
3.1	Efficiency Measurement	<b>IEC 61683/ Equivalent BIS Std.</b>
3.2	Environmental testing	<b>IEC 60068-2 (1,2,14,30)</b>

Sl. No.	Operating Parameter	Desired specification
		/ <b>Equivalent BIS Std.</b>
3.3	Interfacing with utility grid	<b>IEC 61727 or Equivalent</b>
3.4	Islanding Prevention Measurement	<b>IEC 62116 or Equivalent</b>
<b>** VALID IEC CERTIFICATE ALONG WITH TEST REPORT TO BE SUBMITTED</b>		
3.5	Type Test certificate issuing authority <b>(for item no 3.1 , 3.2)</b>	NABL/ IEC Accredited Testing Laboratories or MNRE approved test centers.
4.0	<b>Input (DC)</b>	
4.1	MPPT Voltage range	Compatible with the array voltage
4.2	Total number of MPPT	2 (two) min
5.0	<b>Output (AC)</b>	
5.1	AC Active Power	The output AC Power as mentioned in name plate at unity pf.
5.2	AC Grid Connection	3 Ø 400 V + N 50Hz ,
5.3	Adjustable AC voltage range	As per prevailing Grid code.
5.4	Frequency range	As per prevailing grid code
5.5	AC wave form	Pure Sine wave
5.6	THD at full load	As per prevailing code
6.0	<b>General Electrical data</b>	
6.1	Efficiency	Minimum 97 % at 45 degree centigrade ambient temperature.
6.2	No load loss	0.1% of rated power
6.3	Sleep mode consumption	Less than 5 W
7.0	<b>Protection</b>	
7.1	DC Side	1. Reverse-polarity protection 2. Over voltage protection.
7.2	AC side	1. DC inject protection to grid 2. Over voltage and Under voltage 3. Over and under grid frequency protection, 4. Anti Islanding protection
7.3	Isolation Switch	PV array Isolation switch (DC). If DC isolating Switch is not provided in the inverter it will be provided by the contractor separately nearer to the inverter.
7.4	Ground fault detection device (RCD) which can detect changes in ground current. Rating will be as suitable for inverter	To be provided for transformer-less inverter.
8.0	Interface (Communication protocol)	Suitable port must be provided in the inverter for i) On site upgrade of Software, ii) Instant On site dumping facility for onsite data dumping, iii) Compatible to Web based remote monitoring system
9.0	Web monitoring	Matched with the monitoring and data logging system
10.0	<b>Mechanical Data</b>	
10.1	Protection Class	IP 65 ( min)
10.2	Temperature	0 °C to 55°C
10.3	Cooling	Natural / forced cooling
10.4	Type of Fixing	Wall Mounted

The contractor should submit the warrantee certificate issued by the original inverter manufacturer after delivery of every lot.

#### **7.0 Web enable on line data logger and Remote Monitoring Unit:**

- (i) Web enable data logging system may be an integrated part of the inverter or a separate unit.

- (ii) The data Logger should have the provision of recording electrical parameters on DC and AC side at different stages to study performance of system as well as to study status of the system at a particular instant. The data logger should have required transducer to monitor and record the required system data.
- (iii) Web based Remote Monitoring system must be compatible with data logger.
- (iv) The data logger shall have reliable data storage capacity (for a minimum period of One year) to record and store the minimum desired data mentioned herein under with maximum 15 minutes intervals and there must be provision of offline retrieval of the same at site as and when required.
- (v) The other required accessories, hardware and compatible software will have to be provided as an integrated part of the system to monitor the real time data (maximum 20 minutes delay) through web server. The Data logger will continuously send data to the server.
- (vi) The desired data which will be recorded in the Data logger are as follows:  
AC & DC Volt & Current data, Power generated, Cumulative Energy generated, Fault logs, Temperature, etc.
- (vii) The contractor shall provide the necessary accessories to extract data from the data logger with the system for each site.
- (viii) The system can be monitored from anywhere through internet without installing any specific application software. The server will not be provided by the Purchaser.
- (ix) **The rental charges and other charges of the IP address, data storage space in the host server and free access of the Data through Web for a period of five (5) years from the date of commissioning will be within the cost of contract value.**
- (x) The contractor will arrange Internet connection/ facility at the project site for data transfer by supplying and installing a dongle& a SIM card or by other means **for a period of five (5) years from the date of commissioning and the cost incurred will be within the cost of contract value.**

## **8.0 Inverter LT Panel / AC Combiner panel:**

The output of the string Inverter will be terminated in a Panel styled as **Inverter LT Panel** through 415 V 4 pole MCB at the output of the string inverter.

Desired specification of **Inverter LT Panel** will include but not limited to the following:

Sl No	Parameter	Desired Specification
1.0	In coming MCB (Inverters side )	
1.1	Number	01(one) number
1.2	Type	4 pole
1.3	Rating	415 V, 10 kA, C-Characteristic. The current rating will depend on the capacity of the power plant. The designs have to be submitted for approval.
2.0	Enclosure	
2.1	Degree of Protection	IP-42/43 for indoor type or IP 65 for outdoor type.
2.2	Number of entry and exit	As may be required
3.0	Power Terminal	4 way Power Terminal Block (CONFORMING TO IEC 60947-7-1) in incoming & Outgoing
3.1	Socket	Cu Socket
4.0	Labeling of Panel	Panel name to be engraved with aluminium sheet on the panel

## **9.0 Grid interfacing LT Panel**

Output of the Inverter LT Panel will be terminated to a **Grid Interfacing LT Panel**.

Desired specification of each **Grid interfacing LT Panel** will include but not limited to the following:

SI No	Parameter	Desired Specification
1.0	MCB	
1.1	Number	01(one) number
1.2	Type	4 pole
1.3	Rating	415 V, 10 kA, C-Characteristic. The current rating will depend on the capacity of the power plant. The designs have to be submitted for approval.
3.0	Bus Bar	
3.1	Position	In the Bus Bar Chamber
3.2	Rating	3 Ph Neutral 415 V. The current rating will depend on the capacity of the power plant. The designs have to be submitted for approval.
3.3	Type	Copper
3.4	Size	As per design parameters.
4.0	Indicator ( Have to be provided in incoming & outgoing of MCB)	R,Y,B
4.1	Front Cover ( Only indicator portion)	Transparent to Visualize the Indicator R,Y,B from out side
5.0	Earthing Provision	Terminal Blocks (CONFORMING TO IEC 60947-7-1) will have to be provided for Earthing
5.1	Cable Gland	Double compressive Metallic Gland to be provided.
6.0	Surge protection device	
6.1	Position	Between Inverter and MCB
6.2	Usage as declare by Manufacturer	For AC use only
6.3	Protection class	Type 2
6.4	Number of set	01 Set
6.5	Rating	20 kA (minimum)
7.0	Enclosure	
7.1	Degree of Protection	IP-42/43 for indoor type or IP 65 for outdoor type.
7.2	Type	double door sheet steel (16 SWG), powder coated horizontal / vertical enclosure dust and vermin proof
7.3	Type of Fixing	Wall mounted
7.4	Accessories mounting arrangement	DIN Rail or as suitable
7.5	Socket	Cu Socket
7.6	Labeling of Panel	Panel name to be engraved with aluminium sheet on the panel
7.7	Internal Wiring	6 Sq.mm (min) Cu Cable

## 10.0 Kiosk:

The Array Junction Box, Solar String Inverter, Inverter LT Panel shall be installed in suitable locations in Metallic Kiosks. The kiosks must be of a suitable design, painted for avoiding rust, covered with a door and locking arrangement with good air circulation. The Kiosks must have security arrangement against theft, manhandling etc. Minimum clearance of the lower edge of the equipment from floor should be 0.5m.

Enclosure	Metallic
Degree of Protection	IP-21 for indoor type or IP 65 for outdoor type.
Type of Fixing	Ground/Wall mounted as applicable

The contractor shall submit details of Material and Design of the Kiosk with their Detailed Design Report for according approval.

Necessary civil work as required to construct/fixing the Kiosk(s) shall be done by the contractor. If any civil construction is required for installing the whole arrangement, as and where required, it will be within the cost of contract value.

### 11.0 **Cables & Wirings :**

**The Specification of wiring material of PV Power plant will include but not limited to the following:**

Sl No	Item	Description
<b>A</b>	<b>DC Cable</b>	
1.1	Conductor	Tinned annealed stranded flexible copper according to IEC 60228 class 5
1.2	Standard	PV-1F / 2 PfG 1169/08.2007 / VDE Standard E PV 01:2008-02 / EN 50618/Equivalent
<b>B</b>	<b>AC Cable</b>	
2.1	Rated Voltage	1.1kV
2.2	Construction	
2.2.1	Conductor	Copper
2.2.2	Insulation	PVC
<b>C</b>	<b>uPVC Conduit, tees, bends etc</b>	
3.0	Standard	u PVC ( ISI Marked)
3.1	Ambient Temperature	0 °C to 50 °C
3.2	Type	UV stabilized , temperatures, Shock proof chemical resistant
<b>D</b>	<b>GI Pipe</b>	
4.0	Make	SAIL/TATA/RINL
<b>E</b>	All Cables to be used in the project shall be copper connectors.	

### 12.0 **Guideline of Cabling:**

- i) GI cable tray with perforation of suitable size must be used for laying of cable through uPVC conduit on the floor or Roof. Metallic clamp to be used for fitting/support of the conduit with the cable tray.
- ii) Cable terminations are to be made with suitable cable lugs & sockets etc, crimped properly and cables will be provided with dry type compression glands wherever they enter junction boxes/ panels/ enclosures at the entry & exit point of the cubicles. The panels bottoms should be properly sealed to prevent entry of snakes/lizard etc inside the panel. All cables are to be adequately supported.. Termination of cable shall have to be made by using suitable compression cable gland and sockets by crimping to the size of the cable. Only terminal cable joints will be accepted. Cable joint to join two cable ends will not be accepted.
- iii) All cable/wires/control cable are be marked or coded properly for easy identification. Cables and wires have to confirm to the relevant standards suppliers to specify the specification.
- iv) All fasteners will be made of Stainless steel or Aluminum. Cable Tie must be of Stainless Steel/Aluminum for outdoor installations and for indoor/inside equipment's/inside enclosure have to be of UV Protected PVC/Stainless Steel/Aluminum.
- v) The DC cable shall be properly dressed and as far as possible most of the part of the cable must be inside the conduit.
- vi) All the DC Cable shall be laid through uPVC conduit of minimum 1 inch diameter.

### **13.0 Cable from Inverter Panel to Grid Interfacing Panel upto Point of Common Coupling**

Supply laying fixing of **1.1 kV** Grade armoured, XLPE insulated , copper cable comply with the design and guideline as per Technical Specification clause **No 10.0** from Inverter to *Inverter LT Panel* to Grid interfacing Panel to Point of Common Coupling (Supply Mains). This also includes laying, Glanding, termination of cable in all complete. The Cable size will depend on the individual capacity of the Power Plant. The contractor has to submit the design for approval to the engineering incharge.

### **14.0 Equipment and Array Structure Earthing:**

The above work is part of the total earthing system job and to be included in the contractual value.

- i. Equipment grounding (Earthing) will connect all non-current carrying metal receptacles, electrical boxes, appliance frames, chassis and PV panel mounting structures in one long run. The grounding wire should not be switched, fused or interrupted.

**(a) Earthing Pit with Pipe Electrode:** Earthing with 50 mm dia. GI pipe 3.64 mm thick x 3Mts long (make SAIL/TATA/RINL medium) to be painted with bitumen partly under the ground level and partly above ground level driven to an average depth of 3.65 Mts. below the ground level & restoring surface duly rammed.

**(b)** Earthing pit should be filled with earthing compound as per IS below the ground level & restoring surface duly rammed.

**(c)** Masonry enclosure with the earth pit of size not less than 600mm X 600mm X 500mm (depth) complete with cemented brick work(1:6) of minimum 150mm width duly plastered with cement mortar (inside) shall be provided. Hinged inspection covers of size not less than 300mmX300mm with locking arrangement shall be provided. Suitable handle shall be provided on the cover by means of welding a rod on top of the cover for future maintenance.

Or

**(d)** Chemical earthing 3 Mtr long Cu coated min 250 microns & 17.2 mm dia.

- ii. Earthing to be done using MS flat 25 mm x 3 mm (min) and insulator should be used for laying.
- iii. Earth busbar of galvanized (Hot Dip) MS flat 25 mm x 6 mm (min) on wall having clearance of 6 mm from wall including providing drilled holes on the busbar complete with GI bolts, nuts, washers, spacing insulators etc. as required
- iv. Connecting the equipment to earth bus bar including S & F GI (Hot Dip) wire of size as below on wall/floor with staples buried inside wall/floor as required and making connection to equipment with bolts, nuts, washers, cable lugs etc. as required and mending good damages Solid GI wire of 4 SWG or 20 mm x 3 mm galvanized (Hot Dip) MS strip as per suitability. Cu wire may also be used of min 10 Sq.mm.
- v. Array Structure must be connected to the earth with S&F 25 mm x 3 mm galvanized (Hot Dip) MS flat on wall/floor with GI saddles as required and connection to equipment incl. drilling holes, with bolts, nuts, washers etc
- vi. Joining of earthing strip to be done by Welding as well as drilling holes and connecting/joining with bolts, nuts, washers etc . Bitumen and then Galvanizing spray paint of good quality (IS approved) to be provided in the welding area.
- a) Minimum four (4) numbers of interconnected earth pit needs to be provided in each location (System Earthing and MM Structure Earthing should be separately

interconnected). Minimum required gap shall be provided in between earth pits as per relevant standard. [MMS – 1 no pit & AJB/DC – 1 no pit, LA – 1 no pit and INV, IIP, Kisok & GIP – 1 no pit].

- b) Test point will be provided for earth pits.
- c) Earthing system design should be as per the standard practices.
- d) The Code of Practice Earthing will be IS 3043 (latest edition)
- e) Necessary provision will be made for bolted isolating joints of each earthing pit for periodic checking of earth resistance.
- f) Parallel/ladder/double run earthing of MMS have to be done.
- g) The earthing resistance of the pit must be within 5 ohm.

### **15.0 Lighting arrangement:**

One number 12 watt (minimum) LED light with necessary fittings and wirings are to be provided inside the kiosk. The connection shall be done from existing power supply board of the building.

### **16.0 PV Array Cleaning Arrangement**

Necessary equipment and water supply lines are to be designed & provided with suitable number of outlets in the array field to facilitate automatic easy cleaning of the PV-Modules. Design to be provided for approval.

One bucket, One Mug, Gardening (PVC) pipe : 20' length (min) have to be provided under this contract for each site.

### **17.0 Fire extinguisher**

One number of minimum 6 kg ABC type dry power portable fire extinguishers shall be provided at each location. The installation of Fire Extinguishers should confirm to TAC regulations and BIS standards.

#### **Standards:**

Fire Extinguisher:IS13849/IS 15683 (with latest amendments)

### **18.0 Signage:**

**Project information Signage:** The Signage minimum size must be 4'x 3' in a suitable frame. The Signage provide with detail of the project as approved by authority. The font size on the signage has to be big enough so that everyone can read it easily. The Signage will be fixed up two (02) prominent place of the project area.

#### **Schematic Diagram:**

Schematic Diagram of Installation must be provided on a display board of minimum size 3'x 2' made up of metallic base with a suitable frame. The schematic diagram must be fixed up at any prominent place of installation.

#### **Safety Signage:**

Safety Signage must be provided indicating the level and type of voltage and symbols as per IE Rule at different position as may be required. In the safety signage Voltage level and type of voltage must be mentioned.

**Each set of Safety Signage contain minimum 06 (six) nos. safety signage:**



Location	Quantity
PV Array Field	Minimum 2 nos. (made up of ACP base)
On PV Array JB	01 no. (Sticker/ printed on IIP)
Near Inverters	01 No (made up of ACP base)
On Inverter Interfacing LT Panel	01 no. (Sticker/ printed on IIP)
On Grid interfacing Panel	01 no. (Sticker/ printed on IIP)

**Equipment marking to be done.**

**19.0 Energy Meter**

- 19.1** 3 Phase whole current unidirectional Energy Meter shall be installed at the outgoing side of Inverter LT panel.
- 19.2** The proposed manufacturer of energy meter must have experience of delivery of energy meter to different DISCOMs of India.
- 19.3** The meter must be put in an enclosure made with Polycarbonate sheet.
- 19.4** The energy meter shall conform to the requirements laid down by the CEA's (Installation and Operation of Meters) Regulation, 2013 and any amendments thereof.
- 19.5** The following are technical specifications of the solar generation meter that shall be used

S. No.	Technical Parameters	Whole Current Meters
1	Number of phases and wires	Three Phase, 4 Wire
2	Rating	5 – 30 A/10-60A
3	Standard Voltage and frequency	3X240 V (PN), 415 V (P-P), 50Hz
4	Accuracy class	1.0
5	Type	Whole Current Meter

***DISCOM will also provide a separate Export Import Energy Meter or Net Meter at each location.***

**20.0 Other Conditions**

The work includes necessary excavation, concreting, flooring, platform, necessary finishing, painting, back filling, shoring & shuttering, cable laying, location of installation of different component of PV Power Plant etc. if any , required for completion of the project in all respect shall be as per direction of Engineer-in-Charge.

**Section - 'C'**  
**Special terms and conditions**

**SCC.1.0 Scope of Work:**

The work is to be executed on turkey basis. The Purchaser will not supply any material departmentally. The scope of work will include but not limited to the followings:

- (a) Site visit and field survey at the premises of the Prospective Beneficiaries
- (b) Design of the system
- (c) Obtaining technical approval from the Purchaser
- (d) Timely procurement and transportation to site in properly packed condition of all equipment, materials and miscellaneous item required to complete the project
- (e) Receiving, unloading and transportation at site
- (f) Safe storage
- (g) Final check-up of equipment and commissioning and putting the system into successful functional operation.
- (h) Installation, testing and commissioning of power plant.
- (i) Providing of training material to the end users during onsite training for end users.
- (j) Preparing commissioning certificate and documentation.
- (k) Training and handing over of power plant.
- (l) Providing of routine and break down maintenance of grid connected solar rooftop power plants.
- (m) Fulfillment of warrantee obligation as may arise.

**SSC.2.0 Site Survey:**

- a) The tenderer must inspect and examine the site visit and its surroundings and satisfy himself before submission of his tender about the nature of the ground, sub-soil characteristics, the quantities and nature of the work, material necessary for completion of the work, the means to access to the working site, the H.F.L. & O.F.L., the accommodation he may require for his men and materials and in general he shall obtain all necessary information as to risks, contingencies overhead and other circumstances that may influence or affect his tender rates, and no claim whatsoever will be entertained after acceptance of his tender.
- b) The contractor shall submit site wise Technical Feasibility Survey report indicating technical suitability of site for installation of the GCRTSPV system with roof plan indicating the suitable area for installation of Solar Plant, dimension, north-south direction and any other relevant information for each site, PV Array Lay out, Plant Component Lay out, the structural condition of the roof / type of roof / type of roof treatment (if any) along with all technical particulars along with site wise Single Line Diagram (SLD), Shadow Analysis report, etc. based on the guideline laid down by FISHERIES DEPT.

### SCC.3.0 Warranty:

The contractor must ensure that the goods supplied under the contract are new, unused and of most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the contract.

The warrantee period of the complete PV Systems will be **60 calendar months** from the date of commissioning.

The warranty of the Inverter should be 10 years.

However, the modules will have warranty for 25 years with degradation of power generated not exceeding 20% of the minimum rated power over the 25 years period and not more than 10% up to initial 10 years period as per guideline of MNRE, Government of India.

### SCC.4.0 Defect Liability Period:

60 (sixty) Calendar Month from the date of commissioning at each site.

### SCC.5.0 Comprehensive Maintenance during defect liability period / Breakdown maintenance:

All the equipment to be installed for commissioning of each of the grid connected solar PV power plant and the power plant in whole shall be under Comprehensive Maintenance Contract within the scope of the tender **for 5 (five) years from the date of commissioning**. The equipment or components, or any part thereof, so found defective during Comprehensive Maintenance Contract period will be forthwith repaired or replaced within the scope of guarantee obligation to the satisfaction of the Purchaser.

The scope of support service provides preventive maintenance as & when necessary within the contract period and break down maintenance in the event of malfunctions, which prevent the operation of the power system or part of it within the stipulated time period & free replacement of spares required for maintenance.

The contractor will provide Spare parts & Measuring Instruments during maintenance.

**The Down-Time of PV system should not be more than thee (03) working days.**

### SCC.6.0 Type of Routine Maintenance:

In order to carry out routine maintenance of the power plant, the contractor will provide all labour, material, consumables etc. within the scope of maintenance service. Recommended tusks under the scope of routine maintenance will include but not limited to the followings:

- a) Cleaning of PV modules once in a month.
- b) Checking and tightening of all electrical connections.
- c) Checking and tightening of mechanical fittings.
- d) Checking and restoring of earthing system.
- e) Dusting and cleaning of Inverter and other electrical equipments.
- f) Routine maintenance as recommended by the Original Equipment Manufacturer (OEM)
- g) Renewal of Fire Extinguishers.

The engagement terms along with warrantee & maintenance terms of the agency regarding maintenance with the OEM have to be submitted to FISHERIES DEPT.

### **SCC.7.0 Maintenance Report:**

**Quarterly Maintenance Report** comprising of **Generation Data** for that particular quarter, **period of grid outage** and any other required details for each location as per approved format must be submitted to FISHERIES DEPT.

### **SCC.8.0 Insurance PV Power Plants during Comprehensive maintenance period:**

Operational Policy in the name of the “**Principal of the Project**” i.e **FISHERIES DEPT (Purchaser)** needs to be taken by the contractor after successful completion of the project for individual site. The following perils but not limited to, needs to be covered under the operational policy. **1. Standard Fire and Special Perils including STFI & Earthquake Policy 2. Burglary and Housebreaking Policy including Theft Policy. (Contractor is to be responsible for renewal of the above said policies till completion of five years comprehensive maintenance period. The failure of such renewal will invite deduction of maintenance payment. The amount will be decided by FISHERIES DEPT based on the extent of physical impact of such non-renewal.)**

### **SSC.9.0 Handing Over:**

The work will be taken over by FISHERIES DEPT upon successful completion of all tasks to be performed at site(s) on equipment supplied, installed, erected, commissioned and run **successfully for consecutive 30 days** by the contractor in accordance with provision of this order. During handing over of the complete project work, the contractor will submit all engineering documents related to the work.

#### **Other documents to be delivered to FISHERIES DEPT**

The documents to be delivered to FISHERIES DEPT will include but not limited as follows:

- a) Warranty Certificates of Original Equipment Manufacturer (OEM) for stipulated period as mentioned in the Tender for Solar PV Modules, Inverters, etc.

### **SCC.10.0 Approval of Inverter, Data logger & Web Based monitoring systems:**

- a) The proposed inverter shall have the features and also comply the terms as laid down in the tender.
- b) The proposed inverter (minimum 10 kVA and above) should be used in the similar type of projects in any Government organization / Government undertaking / Government agencies / SNA of MNRE, Govt. of India and in operation with satisfaction for a minimum period of last 01 year from the date of issuance of the NIeT. (Site visit of such inverter(s) is to be arranged by the Agency concerned if required for performance checking. Supporting documents to be submitted. If the documents are not up to the acceptability of FISHERIES DEPT, the bidder have to submit documents as required for satisfaction of FISHERIES DEPT).
- c) In-case of imported inverter(s), original import document containing inverter identification details is to be provided.
- d) The proposed inverter manufacturer must have service centre or authorized service provider anywhere in West Bengal. The contractor shall have to submit the detail of the service centre setup with documentary proof like Trade license, Agreement etc at time of the request for approval of Inverter.

- e) The contractor has to propose to supply Inverter, data logger and Web based Monitoring Systems from maximum two manufacturers. Out of the offered inverters, approval shall be provided for the inverter(s) of one or two manufacturer, subject to compliance of the document(s) as submitted by the Contractor as per tender and observing the features of the Inverter, data logger and Web Based Monitoring System.
- f) Contractor shall be sole responsible for the delay in obtaining approval of the inverter, data logger and Web Based Monitoring System due to non-compliance.
- g) Testing & Demonstration of Inverter have to be provided by the contractor at his place/warehouse/lab having appropriate testing facility along with all requisite documents at the time of approval. The contractor has to submit QAP for approval to FISHERIES DEPT before testing/demonstration. Testing includes but not limited to the following: THD, Efficiency, AC Protection, Anti Islanding, Data dumping, Display Parameters, etc as per acceptability of FISHERIES DEPT in accordance to the specification laid elsewhere in the tender document. Appropriate and satisfactory protection at DC side is to be ensured at the satisfaction of FISHERIES DEPT.
- h) Before going for mass production, approval shall be provided by FISHERIES DEPT for the particular model(s) of the inverter(s).

### **Approval of PV Module**

- a) The contractor has to offer PV Module of maximum two manufacturers. Out of offered PV Modules, approval shall be provided for the PV Module(s) of one or two manufacturer, subject to compliance of the document submitted by the Contractor as per tender.
- b) Testing & Demonstration have to be provided by the contractor at his place/warehouse/lab having appropriate testing facility along with all requisite documents at the time of approval. The contractor has to submit QAP for approval to FISHERIES DEPT before testing/demonstration.

### **Approval of Balance of Systems (BOS)**

The contractor has to offer BOS of maximum three manufacturers. Out of offered BOS, approval shall be provided of one or two or three manufacturer, subject to compliance of the document submitted by the Contractor as per tender.

### **SCC.11.0 Joint Inspection:**

Joint Inspection shall be carried out at various stages of execution of the work as follows but not limited to the following stages:

- a) Site Survey during site feasibility.
- b) Inspection at factory for Witness of testing before Dispatch of materials.
- c) After delivery of materials of GCRTSPV systems at individual site
- d) After Installation of GCRTSPV systems at individual site.
- e) After Testing of GCRTSPV systems at individual site.

**SCC.12.0 Others:**

The Contractor shall bear all charges towards travelling expenses of the Inspecting Team of the FISHERIES DEPT or the authorized representatives of the Outside Inspecting Agency consisting of **maximum two (2) persons at each event for to and fro journey by Air** where available from Purchaser's Headquarters, including boarding and lodging for Inspection at factory. For Joint Inspection at site at different stage of the project the Contractor shall also bear all charges towards travelling expenses from FISHERIES DEPT's Headquarter including boarding and lodging at good comfort level.

I/We have inspected the site of work and have made myself / our selves fully acquainted with local conditions in and around the site of works. I/We have carefully gone through the Notice Inviting Tender including the Corrigendum Notices and other Tender documents mentioned therein. I/We have also carefully gone through the PWD(WB) Schedule and special terms and conditions and agreed to execute all the terms of the priced schedule as per General Conditions Specification as laid down in the said schedule. My / Our tender is offered taking due consideration of all factors and if the same are accepted I/We promise to abide by all the stipulations of the Tender Documents and carry out and complete the work to the satisfaction of the Department.

**Sd/-**  
**The Managing Director**  
**The State Fisheries Development Corporation Limited**