भारत सरकार/GOVERNMENT OF INDIA पोत परिवहन मंत्रालय/MINISTRY OF SHIPPING दीपस्तंभ और दीपपोत निदेशालय/DIRECTORATE OF LIGHTHOUSES & LIGHTSHIPS 5/20, ज़ाफर सैरंग स्ट्रीट/JAFFER SYRANG STREET, चेन्नै/CHENNAI – 600 001



निविदा दस्तावेज़/BID DOCUMENT

के लिए/For

चेन्नई निदेशालय के अंतर्गत कुथेनकुली में न्यू लाइटहाउस के लिए 4KWp

Establishment of 4KWp OFF Grid solar power plant for New Lighthouse at Kuthenkuli under Chennai Directorate.

भारत सरकार/Government of India पोत परिवहन मंत्रालय/Ministry of Shipping दीपस्तंभ और दीपपोत निदेशालय/Directorate of Lighthouses and Lightships 5/20, ज़ाफर सैरंग स्ट्रीट/5/20, Jaffer Syrang Street, चेन्नै/Chennai – 600 001

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भारत सरकार/ Government of India

पोत परिवहन मंत्रालय/Ministry of Shipping

दीपस्तंभ और दीपपोत निदेशालय/Directorate of Lighthouses and Lightships 5/20, जाफर सैरंग स्ट्रीट/Jaffer Syrang Street,

चेन्नै/Chennai – 600 001

खण्ड/SECTION- 1

ई-निविदा आमंत्रण सुचना/NOTICE INVITING e- TENDER

संख्या/No. MDS/47-WS(GE)/2018

For & on behalf of President of India, the Director, Directorate of Lighthouses & Lightships, Chennai (TN), invites on-line Bids, under two cover system (Cover 1-Technical bid, Cover 2-Commercial bid) from the Original Equipment Manufacturers (OEMs) or their authorized agents, for Establishment of 4KWp OFF Grid solar power plant for New Lighthouse at Kuthenkuli under Chennai Directorate comprising of the following works.

Design, drawing, supply and installation of Off grid Solar Power Plant, testing, commissioning and handing over of the system,

• Providing warranty for 5 years from the date of commissioning of the system.

1.	अनुमानित लागत / Estimated Cost of the work	Rs.9,32,760/-
2.	बयाना राशि / Earnest Monet Deposit	Rs.18,655/-in the form of Demand draft/Fixed
	r	Deposit receipt (FDR) of any scheduled Bank in
		favour of Director of Lighthouses and Lightships,
		Chennai payable at Chennai.
3.	निविदा राशि / Tender Fee (non-refundable)	Rs.500/- in the form of Demand draft of any
		scheduled Bank in favour of Director of
		Lighthouses and Lightships, Chennai payable at
		Chennai.
4.	निविदा कागज़ात डाउनलोड करने की अवधि / Download	26 107 12020 (17201) 1 16 106 12020 (16001)
	period of bid- document	26 / 05 /2020 (1730Hrs) to 16 / 06 /2020 (1600Hrs)
5.	निविदा पूर्व बैठक / Pre-bid meeting	09 / 06 /2020 (1200Hrs)
6.	निविदा प्रस्तृत करने की अवधि / Bid submission period	
	1	26 / 05 / 2020 (1730Hrs) to 16 / 06 /2020 (1600Hrs)
7.	तकनीकी निविदा खोलने की तिथि/Date of opening of	17 / 06 /2020 (1630Hrs)
	Technical Bids	
8.	बयाना राशि 🛘 मा और निविदा मूल्य/ Submission of	26 / 05 /2020 (1730Hrs) to 16 /06 /2020 (1600Hrs)
	EMD & Tender Fee	
9.	कार्य पूर्ण करने का समय/Period of completion of work	30 days from the date of award of contract

नोट/Note :

- 1. Tender Fee in the form of Demand Draft drawn in favour of The Director, Directorate of Lighthouses & Lightships, Chennai", Payable at Chennai.
- 2. Earnest Money Deposit shall be furnished in the form of Demand Draft or FDR from any Nationalized Bank, in favour of The Director, Directorate of Lighthouses & Lightships, Chennai", Payable at Chennai on or before 16 / 06 /2020 up to 1600hrs. EMD in any other form shall not be accepted. Validity of the EMD shall be 90 days from the date of opening of Technical bid.
- 3. The details of work are available in the tender document which can be downloaded from Central Public Procurement (CPP) Portal https://eprocure.gov.in/eprocure/app.
- 4. The bid is to be submitted on-line only on https://eprocure.gov.in/eprocure/app up to last date and time of submission of tender.
- 5. Sale of physical tender document is not applicable.

निदेशक/Director

भारत के राष्ट्रपति के लिए और उनकी ओर से For and on behalf of the President of India

दिनाँक/Dated: 22 / 05 /2020

भारत सरकार/Government of India पोत परिवहन मंत्रालय/Ministry of Shipping दीपस्तंभ और दीपपोत निदेशालय/Directorate of Lighthouses and Lightships 5/20, ज़ाफर सैरंग स्ट्रीट/Jaffer Syrang Street, चेन्नै/Chennai – 600 001

खण्ड/SECTION -2

विस्तृत बोली सूचना और बोलीदाताओं के लिए निर्देश DETAILED BID NOTICE AND INSTRUCTIONS TO BIDDERS

2.1 For and on behalf of the President of India, the Director, Directorate of Lighthouses & Lightships (DLL) invite on – line bids, from the reputed and experienced contractors/ parties & Govt. under taking for Establishment of 4KWp OFF Grid solar power plant for New Lighthouse at Kuthenkuli under Chennai Directorate" Tender form can be downloaded from the web site https://eprocure.gov.in/eprocure/app.

नोट/Note:

This section of the bidding documents provides the information necessary for bidders to prepare online responsive bids, in accordance with the requirements of the DLL. It also provides information regarding on - line bid submission, opening, evaluation and award of the contract. It is necessary for the bidders to go through the instructions contained in this section before submission of bid.

2.2 ऑनलाइन बोली हेत् निर्देश/Instructions for on-line Bid Submission

The bidders are required to submit soft copies of their bids electronically on the Central Public Procurement (CPP) Portal, using valid Digital Signature Certificates. The instructions given below are meant to help the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

2.2.1 पंजीकरण/Registration

- (i) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal by using the "Online bidder enrolment" option available on the home page. Enrolment on the CPP Portal is free of charge.
- (ii) During enrolment / registration, the bidders should provide the correct/true information including valid email-ID & mobile no. All the correspondence shall be made directly with the contractors/bidders through email-ID provided.
- (iii) As part of the enrolment process, the bidders shall be required to choose a unique user name and assign a password for their accounts.
- (iv) For e-tendering, possession of valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) is mandatory which can be obtained from SIFY/TCS/n-Code/e-Mudra or any Certifying Authority recognized by CCA India on e-Token/ Smartcard.

- (v) Upon enrolment on CPP Portal for e-tendering, the bidders shall register their valid Digital Signature Certificate with their profile.
- (vi) Only one valid DSC shall be registered by a bidder. Bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse and should ensure safety of the same.
- (vii) Bidders can then log onto the site through the secured login by entering their user ID / password and the password of the DSC / e-Token.

2.2.2 बोली की तैयारी/Preparation of Bids

- (i) For preparation of bid, Bidders shall search the tender from published tender list available on DGLL's website or CPP portal, download the complete tender document, take into account corrigendum, if any published, before submitting their bids. After selecting the tender document same shall be moved to the 'My favorite' folder of bidders account from where bidder can view all the details of the tender document.
- (ii) Bidder shall go through the tender document carefully to understand the documents required to be submitted as part of the bid. Bidder shall note the number of covers in which the bid documents have to be submitted, the number of documents - including the name and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- (iii) Any clarifications, if required, may be obtained on-line through the tender site, or through the contact details given in the tender document.
- (iv) Bidder shall get ready in advance with the bid document to be submitted as indicated in the tender document/schedule in PDF/xls/rar/zip/dwf/jpg formats. If there is more than one document, they can be clubbed together using zip format.
- (v) Bidder can update well in advance, the documents such as experience certificates, annual report, PAN, TIN, EPF registration, service tax registration and other details etc., under "My Space" option, which can be submitted as per tender requirements. This will facilitate the bid submission process faster by reducing upload time of bids.

2.2.3 बोली प्रस्तुतीकरण/Submission of Bids

- (i) Bidder shall log into the site well in advance for bid submission so that he/ she upload the bid in time i.e. on or before the bid submission time.
- (ii) Bidder shall prepare the Tender Fee and EMD as per the instructions specified in the NIT/ tender document. The originals of Tender Fee and EMD shall be submitted to the DLL, on or before the last date & time of bid submission. Bidder shall send the EMD & Tender fee through India post/Courier Service/in person. DLL shall not be responsible for any delay or loss, due to postal/Courier Services. The details of the Demand Draft/FDR, sent physically, shall tally with the details available in the scanned copy and the data entered during bid submission time, otherwise the uploaded bid is liable to be rejected.
- (iii) While submitting the bids on-line, the bidder shall read the terms & conditions (of CPP portal) and accept the same in order to proceed further to submit his bid.

- (iv) Bidder shall select the payment option as off-line to pay the Tender Fee/ EMD and enter details of the Demand Draft/FDR.
- (v) Bidder shall digitally sign and upload the required bid document step by step as indicated in the tender document.
- (vi) Bidder shall note that the very act of using DSC (Digital Signature Certificate) for downloading the tender document and uploading their offer is deemed to be a confirmation that they have read all sections and pages of the tender document without any exception and have understood the complete tender document and are clear about the requirements of the tender document.
- (vii) Bidder shall note that each document to be uploaded for the tender should be less than 2 MB. If any document is more than 2MB, it can be reduced through zip/rar and the same can be uploaded. For the file size of less than 1 MB, the transaction uploading time will be very fast.
- (viii) Utmost care shall be taken for uploading Schedule of rates and any change/ modification of the price schedule shall render it unfit for bidding. Bidders shall download the Schedule of Rates i.e. Section-8, in XLS format and save it without changing the name of the file. Bidder shall quote his rates in figures in white background cells, thereafter save and upload the file in financial bid cover (Price bid) only. If the Schedule of Rate file is found to be modified by the bidder, the bid will be rejected.

The bidders are cautioned that uploading of financial bid elsewhere i.e. other than in cover 2 will result in rejection of the tender.

- (ix) Bidder shall submit his bid through on-line e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids on-line by the bidders at the eleventh hour.
- (x) After the bid submission (i.e. after Clicking "Freeze Bid Submission" in the portal), the bidder shall take print out of system generated acknowledgement number, and keep it as a record of evidence for on-line submission of bid, which will also act as an entry pass to participate in the bid opening.
- (xi) Bidder shall follow the server time being displayed on bidder"s dashboard at the top of the tender site, which shall be considered valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system.
- (xii) All the documents being submitted by the bidder would be encrypted using PKI (Public Key Infrastructure) encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done.
- (xiii) The bidder shall ensure that the bid document submitted shall be free from virus and if the documents could not be opened due to virus during tender opening, the bid is liable to be rejected.

- (xiv) Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- (xv) The bidder shall logout of the tendering system using the normal logout option available at the top right hand corner and not by selecting the (X) exit option in the browser.
- (xvi) Any query relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority or the relevant contact person indicated in the tender.
- (xvii) Any query relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. **The contact number for the helpdesk is 1800 3070 2232.**

2.3 प्रस्ताव जमा करना/Submission of Offer

The tender shall be submitted online in two cover system duly scanned and digitally signed by the authorized representative of the bidder as follows:

A) आवरण/Cover -1 (तकनीकी बोली/Technical Bid)

On-line bids shall be submitted containing copies of following document in Cover-1 for documentary proof, for fulfilling qualifying criteria failing which the offer shall be summarily rejected.

- (i) Scanned Copy of Earnest Money Deposit (in the form of Demand Draft/FDR) from any Nationalized Bank/RBI approved Bank.
- (ii) Scanned Copy of Tender fee (Non-refundable) of Rs.500/- in the form of Demand Draft drawn in favour of The Director, Directorate of Lighthouses & Lightships, Chennai", Payable at Chennai.
- (iii) Scanned copies of proof for eligibility as section 3
- (iv) Scanned copy of tender acceptance letter (Form 9.2)

If the Cover-1, i.e. technical bid, does not contain any of the above mentioned documents or contains incomplete or unsuitable technical details, then the offer shall be deemed liable to rejection/ disqualification. The respective Cover—2, i.e. Price Bid, of the technically disqualified offers shall not be opened. The bidders are cautioned that divulging of any price information in Cover-1 (Technical Bid) will result in rejection of their tender.

B) आवरण/Cover-2 (बोली मूल्य/Price Bid)

The Cover-2 shall contain the price bid in the enclosed "Schedule of Rates" as per the excel format at Section–8.

i) Price bid in excel format (BOQ / Schedule of Rates) provided along with this tender shall be used for quoting price/offer.

- ii) It may be noted that this part shall not contain any terms & conditions. Any condition given in the price bid (Cover-2) will be a sufficient cause for rejection of bid.
- iii) The quoted rates shall be written in figures in the enclosed proforma (BOQ / Schedule of Rates) which shall be duly digitally signed by the bidders or his authorized person.

2.4 बोली प्रस्त्तीकरण और खोला जाना/Submission and Opening of Bid

- 2.4.1 The bid shall be submitted on-line at website http://eprocure.gov.in/eprocure/app only, on or before the due date. The Server Date & Time as appearing on the website http://eprocure.gov.in/eprocure/app shall only be considered for the cut- off date and time for submission of bids. Offers sent through post, telegram, fax, telex, e-mail, courier or by any other mode will not be considered. In case of date of opening is declared, as Central Government closed holiday, tender will be opened on next working day at the same time.
- 2.4.2 Only those bidders shall be considered qualified by the DLL, who submit requisite Tender fee, EMD and necessary documents, accept all the terms & conditions of the Tender document unconditionally and meet the qualifying requirement stipulated in the Tender document. The decision of the DLL shall be final and binding in this regard.
- 2.4.3 The bidder shall bear all cost associated with the preparation and submission of its bid. The DLL will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the tendering process.
- 2.4.4 The prospective bidder require any clarification about tender document may obtain the same on-line/ off-line from Tender Inviting Authority i.e. The Director, Directorate of Lighthouses & Lightships, Deep Bhavan, Chennai, in person or otherwise in writing so as to reach the said office.

निदेशक/Director भारत के राष्ट्रपति के लिए और उनकी ओर से For and on behalf of the President of India

भारत सरकार/Government of India पोत परिवहन मंत्रालय/Ministry of Shipping दीपस्तंभ और दीपपोत निदेशालय/Directorate of Lighthouses and Lightships 5/20, ज़ाफर सैरंग स्ट्रीट/Jaffer Syrang Street, चेन्नै/Chennai – 600 001

खण्ड/SECTION –3

बोली पात्रता मापदंड/ELIGIBILITY CRITERIA FOR BIDDING

3.1 पात्रता मापदंड/Eligibility Criteria

- **3.1.1** It is an essential requirement that the bidder has taken up, executed and satisfactorily completed at least one similar work amounting to not less than **Rs. 7,46,208**/- or two similar works each amounting to not less than **Rs.4,66,380**/- or three similar works each amounting to not less than **Rs.3,73,104**/- during last seven years ending 31st May 2020 in any Central Government / State Government / Public sector Undertaking Organization/Private.
 - Similar work means supply, installation, testing, commissioning, and handing over of OFF/ON Grid solar Power Plant for ensuring uninterrupted smooth availability of Mains supply.
- 3.1.2 The bidder must have at least three years" experiences in Supply, installation, testing, commissioning, and handing over of On/Off Grid connected Solar Power Plant with proper certification of OEM, if bidder is not OEM.
- 3.1.3 The bidder is required to furnish detailed information with regard to their financial capacity, technical capability and experience. Following details with supporting documents shall be furnished along with the Technical Bid-
 - (a) Proof of execution and satisfactory completion of similar works along with copies of work order(s) and work completion certificate(s) during last seven years.
 - (b) Copies of original documents defining the legal status, place of registration, principal place of business, written power of attorney of the signatory of the bidder to commit the bid.
 - (c) Report on the financial standing of the Bidder i.e. annual turn-over of the Company, profit and loss statement and auditor's report for the past three years ending 31st May 2020.
 - (e) Information regarding projects in hand and their progress.
 - (f) Information regarding any litigation, current or during last 3 years, orders regarding exclusion, expulsion or black-listing if any, in which bidder is involved, the parties concerned and disputed amount,
 - (g) Key personnel available, along with their personal details like EPF no. etc, and proposed to be engaged for site management; technical personnel for execution and supervision of the project with their qualification and experience.
 - (h) Copies of Income Tax Returns for the last three years.
 - (i) Registration certificate of the firm with MNRE/ TEDA.
 - (j) Copy of GST registration.

- (k) An undertaking that SPV module manufactured in India only will be used. Undertaking in this respect shall also be submitted from the module manufacturer. The bid shall be rejected if the documents are found false or fake. If at a later stage, the documents submitted are found false or fake, the Contract shall be terminated and performance bank guarantee forfeited. Also, the Contractor shall be fined as deemed appropriate by the employer for breach of trust.
- 3.1.4 It will be an essential requirement that the prospective bidder shall be fully equipped & capable to carry out the maintenance, repair & stocking of spare parts required for maintenance support.

3.2 बोली मूल्य/Cost of Bidding

The bidder shall bear all costs associated with the preparation and delivery of the bid. The employer shall in no case be responsible or liable for these costs.

3.3 आश्वासन/Assurance

The bidder shall be required to give satisfactory assurance of his ability and intention to deliver the goods and services, pursuant to the Contract, within the time set forth therein.

3.4 बोली दस्तावेज़/Bid Document

3.4.1 The bid document contains the following –

Section 1	Short Bid Notice Inviting e-tender.
Section 2	Detailed Bid Notice and Instructions to Bidders
Section 3	Eligibility Criteria for Bidders
Section 4	General Conditions of Contract
Section 5	Special Conditions of Contract
Section 6	Scope of work and System Specifications
Section 7	Evaluation criteria for the Technical Bid
Section 8	Bill of quantity
Section 9	Miscellaneous Proforma

3.4.2 The bidders are expected to examine the bid document including all instructions, forms, terms & conditions and specifications. Failure to furnish any information required in bid document or submission of bid not substantially responsive to the bid document in every respect shall result in rejection of the Bid.

3.5 बोली दस्तावेज स्पष्टीकरण/Clarification on bid document

- 3.5.1 Prospective Bidder requiring any further information or clarification on the Bid document may notify the employer in writing by fax/e-mail at the Employers mailing address indicated in General Conditions of the Contract. The last date & time to submit queries to the Employer on bid document is before the due date. The queries so received shall be dealt in accordance with clause 3.5.2 described below.
- 3.5.2 A pre-bid meeting with prospective Bidders, who have purchased the bid documents, will be held on mentioned in schedule at the Deep Bhavan, Chennai to clarify the issues & to answer questions on any matter that may be received at that stage as stated in clause 3.5.1 above. Bidders are advised to attend the pre-bid meeting, however, non-attendance of the pre-bid meeting shall not be a cause for disqualification of the Bidder. Any substantive clarification or modification arising out of the pre-bid meeting would be finalized only by addendum to bid document. The

outcome of the meeting including the text of questions received (without identifying the source of inquiry) and the responses given shall be uploaded on CPP portal. No further queries shall be entertained after settling clarifications/issues received during the above pre- bid meeting.

3.6 बोली दस्तावेज संशोधन/Amendment of bid document

- 3.6.1 At any time prior to the deadline for submission of Bids, the Employer may for any reason, at his own initiative, modify the bid documents by amendment and same shall be uploaded on CPP portal.
- 3.6.2 The amendment shall be part of the bid document.

3.7 बोली की भाषा/Language of the bid

All documents related to bid shall preferably be in English language. The language for communications shall be English. Any printed literature furnished by the bidder may be written in another language provided that this literature is accompanied by an English Translation. In such case, for purpose of interpretation of the Bid, the English translation shall prevail.

3.8 बोली की तैयारी/Preparation of Bid

- 3.8.1 The bid prepared by the bidder shall be having two Covers viz. Cover-1 (Technical bid) and Cover-2 (Commercial bid).
- 3.8.2 The technical bid shall comprise the following
 - (a) Detailed proposal along with technical specifications and corresponding drawing furnished in accordance with the bid document.
 - (b) Documentary evidence establishing, in accordance with instructions to Bidder, that the Goods and Services to be supplied by the bidder conform to the bid document.
 - (c) Documentary evidence establishing, in accordance with Instructions to Bidder, that the bidder is eligible to bid.
 - (d) Documentary evidence establishing, in accordance with Instructions to Bidder, that the bidder is qualified to perform the Contract if the bid is accepted.
 - (e) All the documents as mentioned in Para 3.
 - (f) EMD in the form of Demand Draft from a Nationalized Indian bank/ RBI approved bank, issued in favour of the Director, Directorate of Lighthouses & Lightships, Chennai or FDR pledged to DLL, Chennai shall be valid for 90 days from date of opening of Technical Bid.
 - (g) An undertaking to the effect that the price bid does not contain any condition.
 - (i) An undertaking to the effect that the design, the Contractor's Documents, the execution of works will be in accordance with the laws of the land.
- 3.8.3 The Commercial bid shall contain Bill of quantities (BOQ at section -8) duly filled in accordance with instructions to bidder.

3.9 बोली मूल्य/Bid Price

- 3.9.1 The bidder shall complete the appropriate price for schedule of works as in BOQ included in the bid document stating item wise, unit price and the total amount.
- 3.9.2 Price quoted by the bidder shall remain firm and valid until completion of Contract.

3.10 बोली मुद्रा/Bid Currencies

The Contract provides for payment of the Contract Price in Indian Rupee only.

3.11 Documents establishing conformity of the Bidder's proposal to the bid document.

- 3.11.1 The documentary evidence of conformity of the goods and services to the bid document may be in the form of literature, drawings, data and shall include detailed description on the proposal"s essential technical and performance characteristics. Apart from above it shall also include the following
 - (i) How the offered solutions shall satisfy functional requirements stated in the MNRE Performance Standards/IEC Test standards.
 - (ii) Documents such as user/operation manual, technical manuals.
 - (iii) Any additional features and functions.
- 3.11.2 A detailed schedule of execution of the work under the Contract (Work Schedule), outlining key activities and critical item on the schedule which could influence the Contract completion date. A time schedule in man-days for the execution of works from the commencement of works to the handing over of the system shall be incorporated.
- 3.11.3 A detailed schedule of works on power supply, environmental controls needed, or any other resources/service/activities if that are to be provided by the Employer indicating clearly their time schedule and criticality must be spelt out.

3.12 बोली का भरा जाना/Filling up of Bid

- 3.12.1 All the rates and amount shall be quoted in whole denomination of the Indian Rupee.
- 3.12.2 The rate of each item shall be quoted in figures. The amount in figures shall be written in such a way that interpolation is not possible.
- 3.12.3 No amount shall be paid to the Contractor for the item for which no rate or amount is quoted by the Bidder, but the contractor shall be bound to do that job/work free of cost (on zero amount). Moreover, for comparison purpose, highest rate quoted by other bidders shall be loaded for the subject component/item.
- 3.12.4 The bidder shall be deemed to have satisfied himself before Bidding as to the correctness and sufficiency of his bid for the works and of the rates & amount quoted in the schedules of works, which rates & amounts, shall, except as otherwise provided, cover all his obligations under the contract and all matters and things necessary for the proper completion of the work as aforesaid in accordance with good practices and recognized principles.
- 3.12.5 In case of any bid where unit rate of any item appears unrealistic, such bid shall be considered unbalanced and non-responsive. The employer may ask for providing satisfactory explanation for such unrealistic quoted rate. If bidder is unable to provide satisfactory reply with supporting analysis of rates, the bid shall be rejected.
- 3.12.6 Each bidder shall submit only one bid for this work. A bidder who submits more than one bid for this work will attract disqualification and rejection of all of his bids and EMD shall be forfeited.

3.12.7 The bidder shall not be under a declaration of ineligibility for corrupt & fraudulent practices in any Govt. Department or organization in India or abroad.

3.13 बोली स्पष्टीकरण/Clarification on Bids

To assist in the examination and evaluation of bids, DLL may, at his discretion, ask the bidder for any clarification on his bid. All responses to such requests for clarification shall be in writing. No change in the prices or substance of the bid shall be sought, offered or permitted.

3.14 प्रारंभिक परीक्षा/Preliminary Examination

The employer will examine the bids to determine whether they are complete, any computational errors have been made, required details have been furnished, the documents have been properly signed or the Bids are generally in order.

3.15 कार्य सौंपा जाना और अन्बंध पर हस्ताक्षर/Award of work and signing the agreement

- 3.15.1 The employer shall award the Contract to the bidder whose bid has been determined to be responsive to the bid document and who has offered the lowest bid price, provided that such bidder has been determined to be
 - (a) Eligible in accordance with the provisions of Clause 3.1.1, 3.1.2., 3.1.3 & 3.1.4
 - (b) Qualified in accordance with the provisions of Clause 3.1.5.
- 3.15.2 The employer shall award the contract within 30 days of the opening of the Technical bid.
- 3.15.3 The bidder whose bid has been accepted shall be notified by LOI for the award by the DLL prior to expiry of the bid validity period by cable, telex or facsimile confirmed by registered letter or by on-line Letter of Intent. The letter of Intent will state the sum that the Employer shall pay the Contractor in consideration of the execution, completion, commissioning and handing over of the works by the Contractor as prescribed in the Contract.
- 3.15.4 Within 15 days of receipt of Letter of Intent, the successful bidder will furnish the Letter of Acceptance, contract performance guarantee in the form of FDR and sign the Agreement with the employer. The Agreement will incorporate all correspondences between the employer and the successful bidder.
- 3.15.5 The E.M.D. of the successful Bidder shall be refunded without any interest within 30 days of award of the contract. The earnest money deposit of the unsuccessful bidders shall also be refunded within 30 days, without any interest, after award of the contract.
- 3.15.6 The tendered rate should be valid for a period of 90 days from the date of opening of technical bids.

3.16 बोली मुल्यांकन/Evaluation of Bids

3.16.1 The DLL will determine whether each bid is of acceptable quality, is generally complete and is substantially responsive to the tender document. For the purposes of determination, a substantially responsive bid is one that conforms to all the terms, conditions & specifications of the tender document without any deviations, objections, conditionality or reservation.

- 3.16.2 If a bid is not substantially responsive, it will be rejected by the DLL and may not subsequently be made responsive by the bidder by correction of the non-conformity.
- 3.16.3 The bid that does not meet minimum acceptable standards of completeness, consistency and details will be rejected for non-responsiveness.
- 3.16.4 If the present performance of the bidder in a current contract for any major work is unsatisfactory as certified by the any authority of the relevant work, the offer of the bidder will be summarily rejected without assigning any reasons thereof.
- 3.16.5 The bidders shall quote the rates only for the items mentioned in the schedule of Rates in excel format provided along with this tender. The rates quoted for the item other than the items mentioned above shall not be considered for evaluation.
- 3.16.6 The rates shall be quoted in Indian Currency only and if quoted in other currency, the offer will be rejected.
- 3.16.7 The units of the items shall be same as per the Schedule of Rates and any other unit mentioned in the offer will be liable to be rejected.
- 3.16.8 Conditional offers are liable for rejection.
- 3.16.9 The Price bid of the prospective bidders, who fulfils the techno-commercial requirement of the bid(s), shall be evaluated further.
- 3.16.10 Any effort by a bidder to influence the DLL in the process of examination, clarification, evaluation, and in decisions concerning award of contract, may result in rejection of the bidder's tender.

3.17 कार्य सौंपने की अधिसूचना/Notification of Award

- 3.17.1 The bidder whose bid has been accepted shall be notified for the award by the DLL prior to expiry of the bid validity period through the Letter of Intent.
- 3.17.2 The Bidder shall promptly check their e-mail box registered with CPP Portal for receipt of any information / clarification / correspondence in respect of their bid. The DLL shall not be responsible for non-receipt/failure of e-mail to the bidders.
- 3.17.3 If any of the information furnished by the bidder is found to be incorrect, the bid/contract is liable to be rejected/terminated and the EMD/ Performance Security will be forfeited.
- 3.17.4 DLL reserves the right to cancel the tender without assigning any reason thereof.
- 3.17.5 Tenders from those tenderers who have not submitted their offer as per NIT will not be considered.

निदेशक/Director भारत के राष्ट्रपति के लिए और उनकी ओर से For and on behalf of the President of India

भारत सरकार/Government of India पोत परिवहन मंत्रालय/Ministry of Shipping दीपस्तंभ और दीपपोत निदेशालय/Directorate of Lighthouses and Lightships 5/20, ज़ाफर सैरंग स्ट्रीट/Jaffer Syrang Street, चेन्नै/Chennai – 600 001

<u>खण्ड/SECTION-4</u>

संविदा की सामान्य शर्तें/GENERAL CONDITIONS OF CONTRACT

4.1. सामान्य/General

- i) DLL shall mean the Director, Directorate of Lighthouses & Lightships, Chennai having its office at Deep Bhavan, 5/20, Jaffer Syrang Street, Chennai 600001 and shall include his legal representatives and successors and permitted assigns.
- ii) Accepting authority shall be DLL or his authorized representative.
- iii) The contract shall mean the notice inviting bid, the bid and acceptance thereof and the formal agreement if any, executed between the DLL and the contractor together with the documents referred to therein including these conditions with appendices and any special conditions, the specifications, designs, drawings, schedule of quantities / items with rates and amounts and schedule of rates. All these documents taken together shall be deemed to form contract and shall be complementary to one another.
- iv) The contractor shall mean the individual or firm or company whether incorporated or not, undertaking the works / jobs and shall include legal representatives of such individual or persons composing such firm.
- v) The contract sum shall mean the sum for which the bid is accepted.
- vi) The site shall mean the premises of the new Lighthouse at Kuthenkuli under Chennai Directorate.
- vii) The works / jobs shall mean the works / jobs to be executed in accordance with the contract and shall include all extra or altered or substituted works or temporary and urgent works as required for performance of the contract.
- viii) The contractor shall satisfy himself with regard to the nature of work to be done, its scope, the conditions of contract, specifications, etc. included in the bid document.
- ix) The contractor shall abide by prevalent rules & regulations for security and safety. Any material brought inside the premises of the office which is required to be taken out from the premises shall have necessary prior written permission from the DLL, or his authorized representative.
- x) The contractor, being the Principal Employer for the workmen engaged by him shall take maximum care against any accident and shall ensure proper safety measures. For any accident, mishappening due to lack of safety measures, the contractor shall be responsible. The contractor in his own interest shall insure the workman so deployed. DLL will not be responsible for any such claims whatsoever.

- xi) The rates shall remain valid for a period of 90 days in all the respect from the date of opening the bid.
- xii) It will be absolutely necessary on the part of the bidder to sign the tender documents for all its parts. The successful bidder at the time of award of the work shall enter into an agreement with the Director, Directorate of Lighthouses & Lightships as per the conditions stipulated in this tender.
- xiii) No interest shall be payable to the contractor against the earnest money /security deposit/performance bank guarantee or any money recovered from the contractor.
- xiv) Within 15 days of the issue of the Letter of Intent by the employer, the contractor shall furnish a contract performance guarantee in the form of FDR. Failure of the contractor to furnish the required performance guarantee by due date shall constitute sufficient ground for the annulment of the award and forfeiture of the EMD.
- xv) Performance guarantee shall be in the name of Director of Lighthouses and Lightships, Chennai. It will be equivalent to 10% of the contract value and shall remain valid 3 months after expiry of 5 Years warranty/guarantee period. The Performance guarantee shall be in the form of FDR.
- xvi) To be eligible for the award of the contract, the bidder shall provide evidence, satisfactory to the DLL of their eligibility, their capacity and adequacy of resources to carry out the subject contract effectively. It is an essential requirement that the tenderer have prior experience in executing similar works. The bidder shall enclose sufficient proof of experience for similar works in other organization.
- xvii) All the future correspondences in this connection shall be addressed to:

The Director,
Directorate of Lighthouses & Lightships,
Deep Bhavan, 5/20, Jaffer Syrang Street,
Chennai – 600 001, Tamil Nadu
Phone No. 044 - 25232807
Fax No. 044 25232720, e.mail:- dlhlschennai@gmail.com

- xviii) During the course of the bid the DLL may modify certain aspects of the bid, by amendment. The modification may be based on DLL"s own initiative or on clarifications issued. Such amendments shall be uploaded in the CPP portal. Additional time required if any due to the amendments shall also be uploaded in the CPP portal. The DLL at his discretion may extend the last date for submission of bids in order to give reasonable time to tenderers to take the amendments into account.
- xix) The DLL may terminate the contract at any time for unsatisfactory response by the contractor and only proportionate amount shall be paid.
- xx) Income tax shall be deducted as per the provision of income tax act.

4.2. संविदा निरस्त किया जाना/Rescindment of contract

If at any stage during the work, the Contractor(s) ceases work or refuses to fulfill his part of the contract, the DLL shall have power to rescind the contract, of which rescission notice in writing to Contractor(s) under the hand of the DLL shall be

conclusive evidence of Contractor(s)"s default and the whole of the Performance Bank Guarantee paid by Contractor(s) shall stand forfeited and be absolutely at the disposal of the Government. The DLL, shall moreover, have the power to adopt any measure for completion of the work in any manner he may choose. In the event of such a course being adopted any expenses which may be incurred in excess of the sum which would have been paid to the Contractor(s), if the whole work had been executed by Contractor(s) (for the amount in such cases, the certificate in writing of the DLL shall be final and conclusive) shall be realized from the Contractor(s) from any money which may be due to him under this or any other contract or otherwise. In the case when the contract has been rescinded under the aforesaid provision, the Contractor(s) shall have no claim for compensation for any loss sustained by him for reasons of having purchased any material or having entered into any engagement or made any advance on account of the execution of the work. But on the other hand, the DLL shall be entitled to take possession of any or part of any material which has been brought by the Contractor(s) to the site of work and in which event the Contractor(s) shall be entitled to such payment therefore as may be considered reasonable by the DLL.

4.3. उप-किराएदारी/Subletting

The contract shall not be assigned or sublet without the written approval of the Director.

4.4. दिवालियापन और संविदा-भंग/Insolvency and breach of contract

The Director may at any time by notice in writing summarily determine the contract without compensation to Contractor(s) in any of the following events-

If Contractor(s) being an individual or if a firm any partner in Contractor(s) shall at any time be adjudged insolvent or shall have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or for Composition under any Insolvency Act for the same being in force or make any conveyance or assignment of his effects or enter into any arrangement with this creditors or suspend payment or if the firm be dissolved under the Partnership Act; or

If the Contractor(s) being a company shall pass a resolution or the court shall make an order for the liquidation of its affairs or a Receiver or Manager on behalf of the debenture holders shall be appointed or circumstances shall have arisen which entitled the court or debenture-holders to appoint a Receiver or Manager; or If the Contractor(s) commits any breach of this Contract not being specifically herein provided for; provided always that such determination shall not prejudice any right of action or remedy which shall have accrued or shall accrue thereafter to the President of India and provided also that Contractor(s) shall be liable to pay the President of India for any extra expenditure they are hereby put up.

4.5. विसंगति और त्रुटि का समायोजन/Discrepancies and adjustment of errors

If there are varying or conflicting provision made in any one documents forming part of the contract, the accepting authority shall be the deciding authority with regard to the intention of documents.

4.6. परेषिती और भ्गतान प्राधिकारी/Consignee & paying authority

The address of the Consignee & Paying Authority is given below;

Name of the Consignee & Paying Authority	Address	Contact phone / Fax
The Director	Directorate of Lighthouses & Lightships, Deep	PH: 044-25232807, 808 FAX: 044-25232720
	Bhawan,5/20 Jaffer Syrang Street, Chennai-600001	E-mail: dlhlschennai@gmail.com

4.7 अप्रत्याशित घटना खण्ड/Force Majeure Clause

- (i) In the event of either party being rendered unable by force majeure to perform any obligation required to be performed by it under this Agreement, the relative obligation of the party affected by such force majeure shall after notice under this clause be suspended for the period during which such cause lasts.
- (ii) The term force majeure as used herein shall mean acts of God, War (declared or undeclared) Riots or Civil commotion, Fires, Floods and acts of Regulations of the Government of India or any of its authorized agencies.
- (iii) Upon the occurrence of any force majeure cause and upon its termination, the party alleging that it has been rendered unable as aforesaid shall notify the other party in writing, within seventy two (72) hours of the alleged beginning and ending thereof giving full particulars and satisfactory explanation in support of its claim.
- (iv) Time for performance of the relative obligation suspended by the "Force Majeure" shall then stand extended by the period for which such causes lasts.

4.8 समाप्ति/Termination

- i) In the event of the Contractor going into liquidation or winding up his business or making arrangement with his creditors, this agreement shall stand ipso fact terminated from the date of occurrence of such event. This termination shall be without prejudice to any other rights to remedies, available to the DLL under this agreement.
- ii) In the event of any breach of terms and conditions of this Agreement or unsatisfactory performance of the contractor, the DLL shall have the right to terminate the Agreement forthwith by giving 30 days notice. The decision of the DLL under this clause shall be final.

4.9 ठेकेदार के कारण पैसे पर ब्याज/Interest on money due to the contractor

The contractor shall not be entitled to interest damages for loss of interest upon any amounts lodged as deposits with DLL or upon payments in arrears or upon any balance, which may, on the final settlement on his accounts, be due to him.

4.10 जुर्माना खण्ड/Penalty Clause

(i) Throughout the stipulated period of contract the work shall be proceeded with all due diligence. The contractor shall pay a sum equal to 0.1% of the cost of the work for each day the work remains incomplete beyond the stated period, provided that the entire amount of compensation to be paid under the provision of this clause shall not exceed 10% of the cost of the work as indicated in the contract.

(ii) All the case of delay shall be decided by the Director of Lighthouses & Lightships, Chennai or his authorized representative.

4.12. अनुमित/सांविधिक अनुज्ञप्ति/मंज़्री/अनुमोदन/Permit/ statuary licenses / clearances/approval

The responsibility of obtaining necessary Permit/ statuary licenses / clearances /approval from designated authority (State Government/ its agencies) will be of the contractor. However necessary administrative assistance will be provided by the DLL

निदेशक/Director भारत के राष्ट्रपति के लिए और उनकी ओर से For and on behalf of the President of India

भारत सरकार/Government of India पोत परिवहन मंत्रालय/Ministry of Shipping दीपस्तंभ और दीपपोत निदेशालय/Directorate of Lighthouses and Lightships 5/20, ज़ाफर सैरंग स्ट्रीट/Jaffer Syrang Street, चेन्नै/Chennai – 600 001

खण्ड/SECTION -5

संविदा की विशेष शर्तें/SPECIAL CONDITIONS OF CONTRACT

5.1 सामान्य/General

The Employer shall test and examine any material to be used and/or workmanship employed in connection with the work. Employer shall also have full powers to delegate his authorities as stipulated in the conditions of contract, to his representative.

5.2 निरीक्षण/Inspection

5.2.1 सामग्री/कार्य की गुणवत्ता/Quality of material/work

- 5.2.1.1 The materials used for the work must be of best quality and fulfilling the specifications aid in the Contract.
- 5.2.1.2 The Employer or his representative's decision to the quality of such material and work will be final and binding on the Contractor. The Contractor shall remove rejected materials from the site of work at his own cost within the time specified by the Employer failing which the Employer or his representative will remove such material from the site of work and shall deduct the cost incurred for such removal from any money due to the Contractor.

5.2.2 निरीक्षण पंजी/Inspection Register

The Contractor shall maintain at the site of work an inspection Register, which must be produced by the Contractor or his agent whenever called upon to do so by the Employer or his representative during their inspection of the work. If the rectifications ordered to be done are not carried out within the time specified by the Employer, the Employer shall have the right to get such work done by any other agency and to recover the cost thereof from the Contractor. This inspection register shall be the duplicate copying type so that one copy of the entries get recorded in the Employer's office. The Contractor shall not make entry of any kind in this register.

5.3 अभिलेख और सामग्री उपयोग/Records and usage of Materials

The Contractor shall maintain a detailed record of all materials received at site or in his store or storage and working area in the vicinity of the site and shall make such records available to the Employer or his representative on demand.

5.4 पूर्ण होने का समय/Time of Completion

The entire scheme shall be executed, tested, commissioned, completed and handed over within a period of 30 days from date of signing of the agreement.

5.5 कार्य अनुसूची/Work Schedule

5.5.1 The Contractor shall submit a time program to the Employer within 10 days from the signing of the agreement. The Contractor shall also submit a revised program

whenever the previous program is inconsistent with actual progress or with the Contractor's obligations. Unless otherwise stated in the Contract, each program shall include-

- (i) The order in which the Contractor intends to carry out the Works, including the anticipated timing of each major stage of the Works,
- (ii) The periods for reviews under "Contractor's Documents",
- (iii) The sequence and timing of inspections and tests specified in the Contract, and
- (iv) A supporting report which includes
 - a) A general description of the methods which the Contractor intends to adopt for execution of each major stage of the Works, and
 - b) The approximate number of each class of Contractor's Personnel and of each type of Contractor's Equipment for each major stage.
- 5.5.2 Unless the Employer, within 7 days after receiving a program, gives notice to the Contractor stating the extent to which it does not comply with the Contract, the Contractor shall proceed in accordance with the program, subject to his other obligations under the Contract. The Employer's Personnel shall be entitled to rely upon the program when planning their activities.
- 5.5.3 Contractor shall promptly give notice to the Employer of specific probable future events or circumstances that may adversely affect or delay the execution of the Works. In this event, or if the Employer gives notice to the Contractor that a programme fails (to the extent stated) to comply with the Contract or to be consistent with actual progress and the Contractor's stated intentions, the Contractor shall submit a revised programme to the Employer in accordance with this sub-clause.

5.6 तंत्र स्वीकार्यता/System Acceptance

During the Integrated System Acceptance Test the complete functionalities of the system shall be evaluated.

5.6.1 गारंटी/वारंटी/Guaranty/warranty:

The bidder shall provide warranty of 5 years from the date of completion of Work / acceptance. During warranty period, the bidder shall attend all Hardware /software problem arising in the solar power plant.

5.7 अनुरक्षण दर्शन/Maintenance Philosophy

- 5.7.1 अनुरक्षण और मरम्मत/Maintenance and Repair -The hardware and technology chosen for the Off grid connected solar power plant shall be in use for at least 10 years. Maintenance support for all hardware and software products shall be required for next 5 years warranty/ guarantee period.
- 5.7.2 अनुरक्षण/Maintainability: All components shall be easily accessible for testing. Systematic flow chart shall be made available for the probable faults with their remedial actions. Supervisory indications, built in test facility and other control switching shall be available.
- 5.7.3 Maintenance philosophy is to replace faulty unit after quick analysis of alarm indications and built in test equipment log. Repair of faulty units can be undertaken at a suitable centralized repair centre. The installation at site shall involve simple plug in connections only.
- 5.7.4 The supplier shall be responsible for the satisfactory performance of the entire system during the 5 Years Warranty/guarantee period.

5.7.6 Supplier shall stock necessary spares of solar power plant and associated equipment during the period of warranty. The maintenance shall cover the repair of equipment/systems/ subsystems/ modules/ cards/ parts/ panels/ connectors/ outdoor telecom cables/ power cables/software supplied by the vendor. Maintenance shall include rectification of faults, routine periodic maintenance and any overhaul that may be required from time to time. Repair shall be in the form of in -situ repairs, emergency repairs, routine repairs and routine regular visits of engineers to sites. The maintenance shall cover all repairable and expendable items of hardware and software elements and peripherals. The maintenance during the warranty shall be comprehensive. Supplier shall supply all essential upgrades/ patches of all software supplied and installed by supplier, free of cost during the warranty period.

5.8 संविदा तैयार करना/Framing of Contract

This contract shall be framed and operated as an Indian Contract in all the respects and in conformity with Indian laws. Law suits and others proceedings arising out of or in connection with the contract works shall be instituted in Courts of Law of Chennai, India.

5.9 कार्य भ्गतान/Payment for Works

- 5.9.1 The Contract provides for payment of the Contract Price in Indian Rupees only as per schedule as mentioned in section 8. GST as applicable, shall be paid extra as per actual on submission of proof of payment as mentioned in Clause 5.9.4 below. The bidders are required to explicitly quote for these components in their bid failing which their bid shall be liable to be rejected.
- 5.9.2 It shall be noted that the price comparison of the bidders shall be made on the basic price only.
- 5.9.3 Payment to the Contractor shall be made by **Director of Lighthouses & Lightships**, **Chennai**, as per details given below-
 - 50% payment of the cost of the contract shall be made after receipt of items in good condition and correct quantity at new Lighthouse, Kuthenkuli under Chennai Directorate.
 - ii) 30% payment of the contract value shall be made after installation, integration, testing and commissioning of the system at new Lighthouse, Kuthenkuli.
 - iii) 20% payment of the contract value shall be made after observing the system for three months & satisfactory performance of the system at new Lighthouse, Kuthenkuli.
- 5.9.4 The payment by the Employer towards Excise duties, GST wherever applicable shall be made extra as per actual. The contractor shall submit proof of payment of these taxes. The amount for which the Bid is approved shall be inclusive of all expenses for the proper completion of the work and shall be inclusive of municipal taxes, local taxes, OCTROI, all royalties, patent rights, other incidental charges etc. The amount offered shall be final and no claim whatsoever on any account shall be entertained.
 - The Directorate is exempted from OCTROI. Necessary certificate wherever required shall be issued on request by Director of Lighthouses & Lightships, Chennai.
- 5.9.5 The prices quoted by the Bidder and accepted by the Employer shall hold good till completion of the works and no additional claims will be admissible on account of any price variation or fluctuation in the market rates.

- 5.9.6 Any notified change in the Excise duties, GST and sales tax (both increase and decrease) from the base date shall be to the Employer's account. For such claims of variations, the
 - Bidder shall produce the Government notification as documentary evidence. Price variation due to any other cause shall be on Bidder's account.
- 5.9.7 Whenever an adjustment is agreed, approved or determined as per Contract, the Employer shall specify the amount payable. For this purpose, reference shall be made to the actual cost of the varied work.
- 5.9.8 It will be the responsibility of the Successful Bidder to obtain import license / custom clearance at his cost, wherever required, on behalf of the Employer. The Employer shall only provide assistance and undertaking wherever required as per the law of the land.
- 5.9.9 The contractor shall pay Income Tax on all payments made to him under the contract. The Income Tax and Surcharge shall be recovered from the contractor from his bills at the appropriate rate as per the relevant provision of prevalent Income Tax Act.
- 5.9.10 The Employer shall not make any direct payment to sub-contractors or to any other contractor's agent.
- 5.9.11 It shall be accepted as a condition of the contract that the payment of the final bill to the contractor less the withheld amount and his acceptance thereof shall constitute a full and absolute release of the Employer from all further claims by the contractor under the contract.
- 5.9.12 Authorized variations shall not vitiate the contract but additions and omissions shall be measured up and dealt with in accordance with the Contract agreement.
- 5.9.13 Rates for extra or reduced items shall be worked out as per relevant conditions of the contract.
- 5.9.14 Time is the essence of the contract and it shall be clearly understood that the contractor is bound to complete the work in all the respect within the time specified in the Bid Document.

5.10 भराई और ढ़लाई आवश्यकता/Packing and Transportation Requirements

- 5.10.1 The responsibility shall lie with the Contractor to ensure that equipment/spare parts/components/materials brought to sites are strictly in conformity to specifications. There shall not be any shortage or excess in items supplied with reference to Bill of Quantities (B.O.Q.) of agreement.
- 5.10.2 The Contractor shall include and provide for securely protecting and packing the equipment and machinery so as to avoid damage or deterioration under rough handling and exposure to extreme temperatures, salt, water, precipitation during transit or storage.
- 5.10.3 The contractor shall take entire responsibility for the packing to ensure that equipment and machinery are brought and installed at site free from any damage.

5.11 स्रक्षा आवश्यकता/Security Arrangements

The security for storage of materials under controlled condition shall be contractor's responsibility and the Employer shall not be responsible for any loss of the material.

5.12 दुर्घटना/Accidents

The contractor shall within twenty four (24) hours of the occurrence of any accident involving serious injury or death of his employee at or about the site or in connection with the execution of the work, report such accidents to the Employer or his representative. The contractor shall also report such accidents to the concerned notified authorities.

5.13 विदेशियों को रोज़गार/Employment of Foreigners

- 5.13.1 If any foreigner is employed by the contractor to work on the sites under this contract, the contractor shall ensure that such a foreigner possesses the necessary special permission issued by the Civil Authorities in writing and also comply with the instructions issued therefore, from time to time. In the event of any lapse in this regard on the part of such foreigner, the Contractor shall be solely held responsible for the lapse and the Employer shall not be liable in any event.
- 5.13.2 For the purpose of necessary clearance for foreign personnel brought in by the contractor, in connection with this contract, he shall furnish the following specific information and also comply with instructions issued from time to time.
 - (i) The number of foreign personnel required.
 - (ii) The period for which each such personnel is required
 - (iii) The nature of work that would be required to be done by them, and
 - (iv) The qualifications and experience of the personnel proposed to be engaged.

If there is any lapse in this regard, the Contractor shall be personally responsible for the lapse and the Employer shall not be held accountable.

5.14 उचित मज़द्री/Fair Wages

- 5.14.1 The contractor shall pay the labourers engaged by him on the work, not less than fair wages, which expression shall mean whether for time, or place of work, the respective rates of wages as fixed by the Central Government/State Govt. /Local bodies as fair wages for concerned areas payable to the different categories of labourers as set out in the schedule.
- 5.14.2 The Contractor shall, notwithstanding the provisions of any contract to the contrary, ensure that fair wages are paid to labourers directly engaged on the works, including any labour engaged by the Sub-contractors in connection with the said work, as if the labourers had been immediately employed by him.
- 5.14.3 The contractor shall comply fully with the provisions of the payment of **Wages Act**, **1936** as amended. However, all the consequential payment shall be made by the contractor.

5.15 पूर्जे और उन्नयन/Spares and Upgradation

- 5.15.1 The contractor shall guarantee the availability of all necessary spares for a minimum period of 5 years from the date of acceptance of the equipment at site. This shall include spares, from third party hardware also.
- 5.15.2 The contractor shall guarantee that all future hardware/software upgradation can be retrofitted to the supplied hardware and software. In the event of any incompatibility, the contractor will replace the whole functional unit at his cost.

5.16 परिवर्तन/Variations

The contractor is not to vary or deviate from the drawings, specifications, schedule of works, general and special conditions of contract or instructions to execute any work of any kind whatsoever unless so authorized by the Employer in writing. If compliance with the Employer's aforesaid order involves extra work, then unless the same were issued in consequence of some breach of this contract on the part of the contractor(s), the later shall be entitled to be paid the price of the said work (to be valued as per clause 4.4). In case such instructions involve reduction in the scope of work and/or any saving in cost, the price adjustment shall be made as per the Contract Agreement.

5.17 नियोक्ता का अधिकार/Right of the Employer

- 5.17.1 The Bid documents issued to the intending Bidders, Bid terms arrived at during process of clarifications together with the letter of acceptance thereof, shall constitute a binding contract between the successful Bidder and the Employer, and shall form the foundation of the rights and obligation on both the parties. If there are varying or conflicting provisions made in any document forming part of the contract, the Employer shall be the deciding authority with regard to the intention/interpretation of the document and his decision shall be binding without any reservations. The right to carry out the work either in conformity with or in a manner entirely different from the terms of this Bid document that may be most suitable before or subsequent to the receipt of Bids due to exigencies of work, is reserved with the Employer.
- 5.17.2 Any error in description, quantity or rate in schedule of works, or any omissions there from shall not vitiate the contract or release the contractors from the execution of the whole or any part of the work comprised therein according to drawings and specifications or from any of his obligations under the contract.
- 5.17.3 The Employer shall not be precluded or stopped from taking any measurements, and framing of estimates or detaining any certificates made either before or after the completion and acceptance of the work and payment, from showing the true amount and character of the works performed and materials furnished by the contractor and from showing that any such measurements, estimates or certificates untrue or incorrectly made and that Employer shall not be precluded or stopped from recovering from the contractor such damages as it may be sustained by reasons of his failure to comply with the terms and conditions of the contract.
- 5.17.4 Neither the acceptance by the Employer nor any payment for acceptance of the whole or any part of the work nor any extension of time nor any possession taken by the Employer shall operate as a waiver of any portion of the contract or any power herein reserved or of any risk of damage. A waiver of any breach of the contract shall not be held to be a waiver of any other or subsequent breach.

5.17.5 साइट क्लीयरेंस/Site Clearance

The contractor shall follow the necessary procedures as per the law in removal of trees or shifting, removing of telegraph/telephone or electric lines (over head or underground), water and sewer lines and other structures etc., if any, which may come in the way of the work. No extra claim for the delay or amount spent in doing such works shall be entertained.

5.18 विनिर्देश/Specifications

The detailed description of work and materials given in Section-6 of Bid documents are not necessarily repeated in the bill of quantities/schedule of work. The Contractor shall adhere to detailed descriptions of work and material given in Section-6 of bid document.

5.19 ठेकेदार का कर्तव्य/Contractor's Obligation

The execution of any item of work where any incidental work is actually required but not specifically stated in the Bid, it is to be understood that the amount quoted by the contractor shall cover such charges also and nothing extra on account of such incidental charges, if any, shall be paid.

5.20 देश के कानून का ज्ञान/Knowledge of the Laws of the Land

The Contractor shall keep himself fully informed of all acts and laws of the Union of India State of Tamilnadu, all local bye laws, ordinances, rules, regulations and all orders and decree of bodies or, tribunals having any jurisdiction or authority which in any way affect the conduct of the works. Contractor shall at all times, observe and comply with all such laws, ordinances, rules, regulations, orders and decrees, and shall give all notices and pay out of his own money any fees or charges to which he may be liable. He shall protect and indemnify the Employer against any claim or liability arising out of violations of any such law, ordinances, legislations, order or decree.

5.21 विद्युत स्थापना के स्रक्षा नियम/Safety Norms of Electrical Installations

- 5.21.1 The Contractor has to carry out all Electrical works in compliance with relevant provisions of the CEA (measures relating to Safety and Electric Supply) Regulations, 2010 (as amended up to date) in every aspect.
- 5.21.2 A standard danger notice in English, Hindi and Tamil with a sign of skull and bones, shall be fixed permanently in a conspicuous position (conforming IS 2551) with name of the solar power plant on the entrance to the enclosure containing solar array (regulation 18).
- 5.21.3 In inverter installed area, a suitable insulating mat conforming to IS 15652 of appropriate voltage level to be provided (regulation 19). The size and thickness of the mat should be minimum 3'x6'x10mm. A danger sticker of suitable voltage also to be affixed on inverter.
- 5.21.4 All solar panels and strings shall be identified and named.
- 5.21.5 Suitable locking and securing of incoming supplies shall be ensured.
- 5.21.6 Instructions (i.e. electric shock treatment chart) in Tamil, English and Hindi for the resuscitation of persons suffering from electric shock to be affixed near the equipments (such as inverter, energy meter etc.) installed area. The single line diagram of the installation also to be displayed.

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चेन्नै/Chennai - 600 001

खण्ड/SECTION-6

काम का दायरा और तकनीकी विनिर्देश/SCOPE OF WORK & TECHNICAL SPECIFICATIONS 6.1. SCOPE OF WORK:

Solar Power System Capacity:

The capacity of SPV Power system to be installed is 4 KWp. The DC output from these SPV modules shall be fed to the Array Junction Box and strings shall be paralleled at sub and main Junction Boxes. The output from the main Junction Box shall be fed to DC distribution Board (DCDB). The DC output from the DCDB shall be fed to the Power Conditioning Unit (PCU). The PCU which mainly consists of Inverter and solar charge controller shall be installed in the power house and shall convert DC power produced by the solar array to AC power as well as charge the battery bank. The PCU shall be given incoming Mains in absence of solar power. The AC power output from the Inverter shall be fed to AC Distribution Board (Metering Panel) which also houses energy meter. The 230V, 50Hz AC single phase output from the ACDB shall be fed to the Lighthouse equipments. The scope of work mainly covers the supply, installation, testing and commissioning of following items including civil and electrical works.

System Configuration:

System Comiguration.	A Cot of Mana amentalling MNDE approved 0 IEO 04045
SPV Modules Capacity	A Set of Mono crystalline, MNRE approved & IEC 61215 Certified SPV module with total capacity of 4KWp
Battery Bank	Supply of 12V/200Ah tall tubular battery suitable for 96V/400AH battery bank
Power Conditioning unit	The power conditioning unit of 96V/5KVA wall mounted or floor mounted comprising of inverter 230V AC pure sine wave output protection devices like over load, over voltage, under voltage, visual alarms to indicate the fault status and solar charge controller facility for Auto cut off of solar power when the battery bank gets fully charged and Digital display for monitoring the parameters like battery voltage, solar voltage, solar current, solar power, Ac output, load current and percentage of charge stored in battery, etc.
Cables	Supply of 6 Sq.mm flexible tin coated copper conductor double sheathed cable of 1.8KV DC,TUV certified suitable for connecting between solar panel and DC Junction box of reputed make
Module Mounting	Provision with tilt angle suitable to site conditions. (Refer item No.2 in BOQ)
Metering System	Suitable instrumentation for recording the data of the power generated and indicators for voltage and amps output from the SPV array.
Safety Units	Suitable lightning arrester, over voltage protection, Over / Under charge protection and earthing, rubber mats, Danger boards etc. as per requirement.
MPPT (Maximum Power Point Tracking) Provision	YES

6.2. TECHNICAL SPECIFICATIONS

6.2.1 SPV MODULE

- High efficiency Mono Crystalline Solar cells
- Cells embedded in EVA (Ethylene vinyl acetate)
- · Low Iron toughened glass on the front side
- · Water proof foil on the back side
- High strength frame
- IEC 61215 Certified
- Any reputed Company which conforming IEC 61215 certified, as per MNRE Specifications.

6.2.2 बढते संरचना/Mounting Structure

The mounting structure is to be designed for saline atmosphere and wind load of maximum 250Km/hour as the site location is near to the shore.

Type	Minimum 4 feet high structure
Material	HDG 120 micron Galvanized MS.
Overall	
Dimensions	As per design for the said wind rating
Coating	Hot dip (galvanized) / Anodized / Powder coated
Wind Rating	100-250 (max) Km/hr
Tilt angle	8 Deg
Foundation	PCC (1:1 1/2:3) as per drawing attached as annexure III
Fixing Type	SS 304 fasteners / GI coated

6.2.3 Battery

The battery bank of capacity 96v/400Ah using 12V/200Ah – 16Nos. Tall, full Tubular Exide batteries are connected in series/parallel and Installed on the stand (Galvanized iron made) with wooden plank. The battery will be tubular type, Exide make suitable for solar applications. The metallic links for interconnecting the cells shall be provided along with battery.

- Self discharge per month < 3% @ 27°C
- Charge efficiency > 93% @ 20% DOD.
- Topping up frequency not more than twice in a year after commissioning.
- Insulated terminal covers, features, Aqua trap cum sealed floats and charge instruction card supply.
- Low antimony Tubular positive plates.
- The suggested cycles are:
 - a) 7500 cycle@20% DOD
 - b) 1500 cycle@80% DOD

6.2.4 Cables

Suitable gauge (6 sq.mm) of Tin coated DC copper cables from SPV array to the main junction box, power conditioning unit and utility points will be used, as per IEC 60189. The cables from solar array to PCU to be laid using suitable PVC pipes of size 2" x 6Kg. Dressing of cables under solar panel to be done by Teflon cable ties.

6.2.5 Power Conditioning Unit

The power conditioning unit of 96V/5KVA wall mounted or floor mounted comprising of inverter 230V AC pure sine wave output protection devices like over load, over voltage, under voltage, visual alarms to indicate the fault Status and solar charge controller facility for Auto cut off of solar power when the battery bank gets fully charged and Digital display for monitoring the parameters like battery voltage, solar voltage, solar current, solar power, Ac output, load current and percentage of charge stored in battery, etc.

6.2.6 Junction Box

- The Junction boxes will be dust, water proof and of FRP made or MS (CRCA) as per Indian Standards. The terminals will be connected by copper lugs or bus bar of proper sizes.
- These will have suitable cable entry points fitted with cable glands.
- Suitable markings shall be provided on the lugs or bus bar for easy identification and cable ferrules will be fitted at the cable termination points for identification.
- Each main junction box shall be fitted with appropriate rating blocking diodes.
- The junction boxes shall have arrangement for :
 - Combine groups of modules into independent charging sub-arrays that will be wired into the controller.
 - Provide arrangement suitable rating of fuses for each string.
 - Provide a test point for each sub-group for quick fault location.
 - The ratings of junction boxes shall be suitable with adequate safety factor to inter connect the Solar PV array.

6.3 Safety Units

Lightning Arrester (LA) and over-Voltage (O/V) Protection:

- The SPV Power plant will be provided with LA and O/V protection.
- The LA shall be made of required capacity with copper conductor on the basis of the necessary meteorological data of the locations for the project.
- Necessary foundation of holding the LA is shall be arranged keeping in view the wind speed of the site and flexibility.
- LA shall be earthed through standard size copper plate and strip with earth pit.

6.4 Earthing

- 2 Nos. of Earthing works is to be done using 2' x 2' x 3mm size of copper plate and 1" x 3mm strip. (As per the ISI standards, the copper strip should be bolted & brazed with the plate, kept at 6 feet depth of ground with a 600 mm dia "C" class GI pipe with wire mesh funnel for watering)
- Each array structure of the PV array shall be properly grounded.
- Provision shall be made for shorting and grounding of the PV array at the time maintenance of work.
- All metallic parts/shielding of the system shall be systematically grounded in accordance with Indian Electricity Act / IE Rules as amended up to date. Earth resistance shall be tested and maintained to 0.5 Ohms.
- The earthing pit shall be made as per IS 3043.(Construction of Inspection chamber of size 450 x 450 x 450 mm with 100 mm thick brick walls over a P.C.C. layer. Keep 100 mm of the chamber above the ground level. Cover the top with a cast iron (CI) cover).

6.5 Monitoring of electrical energy generation from solar power system.

 Electrical energy meter shall be installed to monitor energy generation from solar power system and fed to respect load..

6.6 Minimum Technical Requirement/Standards for Various Equipments Required in Solar Power System as per MNRE

6.6.1 PV MODULES:

I. The PV modules must conform to the latest edition of any of the following IEC/ equivalent BIS Standards for PV module design qualification and type approval:

Crystalline Silicon Terrestrial PV Modules : IEC61215/IS14286

II. In addition, the modules must conform to IEC 61730 Part 1- requirements for construction & Part 2-requirements for testing, for safety qualification.

6.6.2. BALANCE OF SYSTEM (BOS) ITEMS/COMPONENTS:

I. The BOS items/components of the SPV power plants/systems deployed under the Mission must conform to the latest edition of IEC/equivalent BIS Standards/MNRE specifications as specified below:-

BOS item/component	Applicable BIS /Equivalent IEC Standard Or MNRE Specifications				
	Standard Description	Standard Number			
Charge Controller / MPPT	Environmental Testing	IEC 60068-2 (1, 2, 14, 30)/ Equivalent BIS Std.			
Units Power Conditioners / Inverters**including MPPT and Protections	Efficiency Measurements Environmental Testing	IEC 61683 / IS 61683/ IEC 60068-2 (1, 2, 14, 30) /Equivalent BIS Std			
Battery	Rated Ah capacities, overall dimensions, performance requirements and tests	IS 1651 : 2013			
Cables	General test and Measuring Methods PV insulated cables for working Voltages up to and including 1100 V for AC and 1.8 KV for DC and UV resistant for outdoor installation.	IEC 60227 / IS 694 IEC 60502 / IS 1554 (Pt. I & II)			
Switches/Circuit Breakers /Connectors	General Requirements Connectors – safety A.C. / D.C.	IEC 60947 part I,II,III/ IS 60947 Part I,II,III EN 50521			
Junction Boxes /Enclosures for Inverters/Charge Controllers/Luminaries	General Requirements	IP 54 (for outdoor)/ IP 21 (for indoor) as per IEC 529			

^{**}In case if the Charge controller is in-built in the inverter, no separate IEC 62093 test is required and must additionally conform to the relevant national / international Electrical Safety Standards wherever applicable.

6.6.3. AUTHORIZED TESTING LABORATORIES/ CENTERS.

I. PV modules must qualify (enclose test reports/ certificate from IEC/NABL accredited laboratory) as per relevant IEC standard. Additionally the performance of PV modules at STC conditions must be tested and approved by one of the IEC / NABL Accredited Testing Laboratories including Solar Energy Centre. However, qualification certificate from IEC/NABL accredited laboratory as per relevant standard for any of the higher wattage regular module should be accompanied with the STC report/ certificate.

II. Test certificates for the BOS items/ components can be from any of the NABL/BIS Accredited Testing-Calibration Laboratories/ MNRE approved test centers.

6.7 सिविल कार्य/Civil Works

Foundation of Cement Concrete in the ratio $1:1\frac{1}{2}:3$ of size as per drawing enclosed as annexure-III with plastering in Cement mortar in the ratio 1:4 for Solar Photo Voltaic Mounting Structure.

6.8 अनुरक्षण दर्शन/Maintenance Philosophy:

The maintenance procedure as follows to be provided by the firm during entire warranty period of 5 years.

- 6.8.1 The Contractor shall be responsible for the satisfactory performance of the entire system during the 5 Years Warranty. The Contractor shall stock necessary spares of solar power plant and associated equipment during the period of warranty.
- 6.8.2 The maintenance shall cover repair of the equipment/systems/ subsystems/ modules/ cards/ parts/ panels/ connectors/ outdoor telecom cables/ power cables/software supplied by the vendor, repair and maintenance of the system.
- 6.8.3 The Maintenance shall include rectification of faults, routine periodic maintenance and any overhaul that may be required from time to time. The Repair shall be in the form of in-situ repairs, emergency repairs, routine repairs and routine regular visits of engineers to sites.
- 6.8.4 The maintenance shall cover all repairable and expendable items of hardware and software elements and peripherals. The maintenance during the warranty shall be comprehensive. The Contractor shall supply all essential upgrades/ patches of all software supplied and installed by supplier, free of cost during the warranty period.
- 6.8.5 Routine Preventive maintenance of all the equipment shall be carried out at once in 3 months beginning of each quarter of the year. Contractor shall make necessary arrangement to collect the equipment from the respective site if the equipment required workshop attention after ensuring the replacement from his inventory so that the operational availability of the system is not affected.
- 6.8.6 The Lightning arrester and surge protectors to be provided for the Solar power plant. Lightning and damages to the equipment due to surges shall be part of warranty.

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खण्ड/SECTION -7

तकनीकी बोली का मूल्यांकन मापदंड/EVALUATION CRITERIA OF TECHNICAL BID

7.1 सामान्य/General

- 7.1.1 The Technical Bids shall be evaluated by a Committee. It is mandatory on the part of the bidder to score a minimum of 70% to qualify for the opening of commercial bid.
- 7.1.2 The commercial bids of only those bidders shall be opened whose bid is technically qualified. Once technically qualified, the bidders will be informed about opening of the commercial bids.
- 7.1.3 The technically qualified bidder who has quoted the lowest rates shall be declared successful bidder.

7.2 तकनीकी मूल्यांकन/Technical Evaluation

The Technical Evaluation shall be carried out based on following attributes to ascertain the quality of bid-

SI.	Attri	butes		Max	Evaluation criteria				
No.				Marks					
1	Statutory Requireme			30					
	Self attested copy of	valid MNRE/TED	OA and						
i)	firm registration			15					
ii)	Self attested copy of F			5					
iii)	attested copy of GST			5					
iv)	Affidavit that bidder is	not blacklisted		5					
2	Financial Standing of	of the Firm		20					
	Proof of average annu	ual Turnover for	last 3						
i)	years			10		60% marks for n			
					ii) 100% marks for twice the minimum				ninimum
					eligibility criteria or more				
					iii)	In between (i) 8	ֆ (ii) ¢	on pro-rata	a basis.
	ii) Annual Report/Audited balance sheet		4						
	Income tax return for 16-17, 17-18, 18-19 3								
iv)	Solvency Certificate			3	Bas	sed on the bank			
	Experience in similar class of work as per			00	60% marks for minimum eligibility			ibility	
3	Clause No-3.1.1			20		criteria	(L .	المالة المالة	
						100% marks			ninimum
						ibility criteria or			
	<u> </u>		1			In between (i) 8	ጷ (II) C		a dasis
4.	Performances of works		30		Very Good		30		
						Good		25	
						Fair		15	
		T = T = T	<u> </u>	400	IV)	Poor		0	
		TOTA	AL	100					

निदेशक/Director

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<u>खण्ड/Section -8</u> मात्रा बिल/BILL OF QUANTITY

SI.N	Item Description	Qty	Unit	Rate	Amount
1	MNRE approved 340W/24V Mono crystalline solar panel of reputed make	12	Each		
2	Solar Panel mounting structure of 120 microns Galvanized iron (GI) 100 x 50 x 50 X 6mm channel for legs and support and 50 x 50 x 6mm 'L' angles for mounting solar panels The structure should withstand upto 250 KM of wind force. SS bolts and nuts of 304 grade only used.	1	LS		
3	Civil masonary work for concreting the pedestals in the ration of 1:1.5: 3 on the roof top for withstand the wind force of 250Km/hr (8 Legs)	1	LS		
4	Power Conditioning Unit 96V/5KVA (Pure sine wave) along with inverter and solar charge controller. (Make: Consul Neowatt / Emerson / Amaron /Power One/ Luminous brand having ISO 9001:2008 certifications or as per MNRE Specification)	2	Each		
5	Supply of 12V/200AH, Tubular Batteries suitable for battery bank of 96V/400AH Make: Exide	16	Each		
6	Fabrication and supply of assembling type battery stand of 1000 mm x 2000 mm x 500 mm with GI frame using 50 mm x 50 mm x 6 mm thickness "L" angle and 35 mm x 6 mm flat with 20mm thickness of 1000 mm x 2000 mm country wood suitable for keeping 16Nos, $12V/200Ah$ battery	1	LS		

7	AC distribution Box comprising of surge protector, digital energy meter, Manual bypass switch for load in case of PCU fault Indicators, etc.	1	Each	
8	DC Distribution box with surge suppressors, MCB's / Fuse for isolation of Solar array, diodes etc.	1	Each	
9	Installation, testing & Commissioning of Solar power plant at Kuthenkuli Lighthouse including interfacing suitable 6 Sqmm Tin coated DC cable, IP65 Connector, PVC conduit, Junction box, Copper strip & plates for earth pits (3Nos.), Lightning arrestor, rubber mat transportation of material, tools and tackles etc. Complete.	1	LS	
	Total			

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खण्ड/Section - 9

मिस्केलनोस एनेक्सीक्स/MISCELANEOUS ANNEXURES

Form 9.1 Proforma of Tender Acceptance Letter.

Annexure – III: Drawing for Civil works and Solar Structure Plan

निदेशक/Director भारत के राष्ट्रपति के लिए और उनकी ओर से For and on behalf of the President of India

निविदा स्वीकृति पत्र/TENDER ACCEPTANCE LETTER

(To be given on Company Letter Head)

Date:

To,

The Director,
Directorate of Lighthouses & Lightships,
Deep Bhavan, 5/20, Jaffer Syrang Street,
Chennai - 600001

Sub: Acceptance of Terms & Conditions of Tender

Tender Reference No:	

Name of Tender / Work: Establishment of 4KWp OFF Grid Solar Power Plant for New Lighthouse at Kuthenkuli under Chennai Directorate

Dear Sir,

I. We have downloaded / obtained the tender document(s) for the above mentioned

"Tender/work" From the web site(s) namely:

as per your advertisement, given in the above mentioned website(s).

- 2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. 01 to 37 (including all documents like annexure(s), schedule(s), etc), which shall form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
- 3. The corrigendum(s) issued from time to time by your department/ organization too has also been taken into consideration, while submitting this acceptance letter.
- 4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document/ corrigendum(s) in its totality / entirety.
- 5. In case any provisions of this tender are found violated, then your department/ organization shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the full earnest money deposit absolutely.

Yours faithfully,

(Signature of the Bidder, with Official Seal)

