TENDER DOCUMENT FOR
DESIGN, SUPPLY, INSTALLALTION, TESTING AND COMMISSIONING OF 180 KWP ROOF TOP SOLAR PV POWER PLANT AT IIMB, BANNERGHATTA ROAD, BANGALORE-560076

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This Tender Document contains all the Pages duly read and accepted by Me/Us.

INDIAN INSTITUTE OF MANAGEMENT BANGALORE
BANNERGHATTA ROAD, BANGALORE – 560076

7th November 2025

NOTICE INVITING e-TENDER

e-Bid Documents are invited from reputed firms for the work of **"Design, Supply, Installation, Testing and Commissioning Of 180 kWp Roof Top Solar PV Power Plant at IIMB"** with the capacity of 180 KWP**.** All as per the scope of work. The approximate value of the project is Rs. 1,00,00,000/- + GST as applicable.

E.M.D (Rs.) to be submitted along with the Bid Document	**Period of Completion**	**Issue of Bid Document online**	**Last Date of Submission of online Tender**	**DATE OF OPENING**	
				Technical Bid	**Financial e-bid**: Only after satisfaction in **Technical Bid**, the online price bids of the qualified bidders will be opened.
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Rs.2,50,000/-	**Four Months**	07/11/2025 to 05/12/2025 From IIMB Website	Upto 05/12/2025, 15:00hrs	Opening of Online Tender (Technical Bid): 08/12/2025 15.00 Hrs	Qualified bidders will be auto intimated by CPP Portal.
Pre-Bid Meeting			Date: 17.11.2025 Time: 15.00 hours Venue: Estate Section, IIMB		

I. INSTRUCTIONS TO BIDDERS:

1. Bid Validity: 120 days from the date of opening of Online Price Bid.

2. Nature of Contract: Turnkey contract (EPC) –

(a) Design, Engineering, Supply, Installation, Testing and Commission of the Solar Power Plant,
(b) Design, Engineering, Fabrication, Erection of Elevated MS Structure
(c) Comprehensive Warranty of the Plant installed and
(d) Comprehensive Operation and Maintenance of the Plant

3. The nature of the tender is Two Bid System i.e. Technical Bid and Price Bid. The rates are to be quoted only in the Online Closed Price Bid.

4. Period of Completion: Four Months

5. Downloading the Tender: The procedure for downloading the Tender Document and Price Bid is mentioned in this document.

6. Downloading of Tender Document:

The bidders may download the Tender Document (Technical Bid only) from any of the below mentioned websites during the period mentioned above.

(a) IIMB Website: www.iimb.ac.in/tender_notices
(b) CPP Portal: https://eprocure.gov.in/eprocure/app

7. Submission of Tender: Tender shall be submitted online only, in Central Public Procurement Portal (CPP Portal).

8. Defects Liability Period: FIVE YEARS from the date of completion of work.

9. Warranty Period: Solar PV Panel – 25 years, Inverter – 10 years.

10. Operation and Maintenance Period: FIVE YEARS. The contractor shall carry out the operation and maintenance of the plant. The details of operation and maintenance activities are mentioned separately in this tender.

11. A) Notice Inviting Tender, any corrigenda / addenda issued, minutes of the Pre-Bid Meeting, replies given to clarifications raised by the bidders if any, form part of the Tender Document.

B) The bidder should check for any of the above uploaded in CPP Portal before submission of the Tender Document (Technical and Price bid). If the bidder submits the tender before the due date, he should be regularly checking the portal for any of the above uploaded, and he should download that document and submit the same with seal and sign on the document. If the revised price bid is uploaded, the bidder should download the Price Bid again, quote the rates referring to the revised price bid and upload the same again.

C) In case any bidder does not upload the revised price bid, the old price bid uploaded by him will not be considered and his tender gets rejected even though he is qualified in the Technical Bid.

12. If any bidder submits the tender without considering the corrigenda uploaded if any, or if any bidder does not submit the revised price bid, or if any bidder does not submit the additional supporting documents, the tender submitted by such bidder will be rejected summarily.

The bidder should regularly visit the portal for checking the same till the last date of submission of the tender and submit the tender (online) only after checking the corrigendum / any other additional information uploaded in the websites mentioned above.

If any bidder submits the tender before the due date and after his submission of tender, any corrigendum / addendum is uploaded which is directly or indirectly related to quoting in the price bid or submission of the supporting documents other than those prescribed in the tender, such bidder shall revoke the submitted price bid and resubmit the price bid with the revised rates if required and also submit the additional supporting documents.

13. PRE-BID MEETING:

A. Pre-Bid Meeting will be conducted before submission of the Tender. The bidders may send the clarifications to the email ids mentioned in this Tender Document and/or may attend the meeting in person. The pre-bid meeting will be conducted at Estate Section, IIMB. In case of any changes in the mode of conducting the meeting, the intimation will be provided in the CPP Portal.

B. If the bidder does not have any query / request for clarification, it will be understood that he has gone through all the relevant clauses, and he is satisfied. No claims or misinterpretation of words will be entertained after award of work.

C. Minutes of the Pre-Bid Meeting will be uploaded on CPP Portal. Minutes of the Pre-Bid Meeting forms part of the Tender. The bidder must check for the minutes of the Pre-Bid Meeting before submission of the Tender.

D. The bidders should download the minutes of the Pre-Bid Meeting, sign on the same with seal and upload it along with the other documents while submitting the Tender.

14. Conditional tenders are liable for rejection.

15. EVALUATION OF BIDS:

A. Projects undertaken outside India will not be considered for evaluation.

B. There will be 2 Steps of Evaluation.

Step-1 Evaluation: This consists of evaluating the documents submitted by the bidders as per the parameters mentioned under Eligibility Criteria.

Step-2 Evaluation: The bidders who qualify in Step-1 Evaluation process will be considered for this step. This consists of Design Presentation before IIMB Committee. The bidders who qualify in Step-2 Evaluation process will be considered for opening of online Price Bids.

16. ELIGIBILITY CRITERIA (Step 1 evaluation process):

A. Financial Position: Average annual financial turnover for the last three financial years i.e. 2024-25, 2023-24 and 2022-23 should be Rs. 1.00 Crore and above**.** Documentary proof in support of the three-year financial status of the company shall be submitted.

The bidder may submit any one or all of the following documents as documentary proof:

(a) CA Certificate
(b) Audited Profit and Loss Account and Balance Sheets for the above-mentioned 3 financial years
(c) IT Returns for the above-mentioned 3 financial years

If any bidder submits the proof for less than three years, the total of the same will be considered as the total of three years and the average will be calculated for three years.

Eg: If a bidder submits the documents for only two years as Rs. 12,00,00,000/- for each year, total will be Rs. 24,00,00,000/-and the average will be (240000000 / 3) Rs. 8,00,00,000/-.

If such average amount is either equal to or more than Rs. 1 Crore, such bidder will be considered as qualified for this particular criterion.

B. Solvency Certificate: The bidder should submit the Solvency Certificate for the value of Rs.40,00,000/- issued by any Nationalized or Scheduled Banks only. The solvency certificate shall have been issued within one year from the date of publishing of this tender.

C. Legal Status: The bidder shall be a
(a) Registered Company or
(b) Partnership Firm or
(c) Joint Venture

The bidder shall submit Certificate of Incorporation or Registration documents as proof. In case any bidder is applying as a Joint Venture, such bidder shall submit the Consortium Agreement clearly defining the roles of the bidding agency.

D. Structural Experience: The bidder should have completed at least 1 no. elevated structural work for installing the roof top solar power plant of 150 kWP

and above capacity in India during the last 5 years. Work Orders and completion certificates should be submitted as proof of work done.

E. Solar EPC Experience: The bidder should have completed at least 3 nos. rooftop solar projects, each with 150 kWp and above capacity during last 5 years in India. Work Orders and completion certificates should be submitted as proof of work done.

Note: With respect to above criteria, as a part of the evaluation process, IIMB may visit the sites of the clients of the bidders. The concerned bidder will be informed in the case of client visits. Such bidder shall make arrangements for these client site visits. And the bidder shall furnish the contact details of such clients.

In the case of negative feedback from the client of any bidder, tender of such bidder gets rejected.

F. Tie-up with the Third-Party Agency: If a bidder has a tie-up with the third-party agency for the elevated structural work, such bidder shall submit the agreement with the said agency. In this case, the structural work experience of the third-party agency shall be considered for evaluation. The financial position, and the Solar EPC experience of the bidding agency shall be considered for evaluation.

G. Site Visit Certificate: Site Visit of the bidder is mandatory. The bidder shall visit the site before submitting the bid.

The bidder shall visit the site by obtaining permission from the Chief Manager (Infrastructure). The bidder shall obtain the SITE VISIT CERTIFICATE from IIMB after visiting the site. The bidder shall submit the copy of the Site Visit Certificate in CPP Portal while submitting the bid.

NOTE: If the bidder submits the tender without the site visit, such tender shall be summarily rejected.

H. PAN & GST Registration: The bidder shall submit the PAN Card and GST Registration Certificate.

I. Declaration Regarding Non-Blacklisting:

Bidders should not have been carrying any adverse remarks in IIMB or carrying other similar reports from any authority.

Bidders who are debarred/ blacklisted by any Central / State Government Organization / DGS&D / NCCF / Kendriya Bhandar / PSU during the last three years are not allowed to participate in the tender. In case the bidder is found to be debarred or blacklisted at any point of time during the evaluation period, tender of such bidder will become null and void and he will be declared as not qualified for opening of price bid.

The bidder shall submit a declaration in his office letterhead regarding non-blacklisting. ***(Please see Proforma G for the format)***

17. DESIGN PRESENTATON (Step 2 Evaluation process):

The bidders who qualify in the Step 1 evaluation will be considered for Step 2 evaluation process.

The bidders will be invited to give design presentations before IIMB Committee on the date and time specified for them.

The bidders who score 70 or more in the Presentation will be qualified for opening of their online price bids.

Table below shows the parameters and the maximum marks for each parameter.

Sl. No	Criteria	Sub-Criteria	Weightage (%)	Max Marks	Remarks
1	Bidder's Credentials & Experience	Total installed capacity (MW)	10%	10	≥ 5 MW - 5 marks ≥ 4 MW and < 5 MW - 4 marks ≥ 3 MW and < 4 MW - 3 marks ≥ 1 MW and < 2 MW - 2 marks ≥ 1 MW - 1 mark
2	Technical Approach & Methodology	Structural design approach- wind/ seismic/ load analysis	35%	5	Design review against standards and practicality; partial marks if gaps identified. Marks will be allotted on proportionate basis.
		Corrosion protection		5	
		Modularity		15	
		Layout, Space utilization, Maintenance walkways		10	
3	Solar Power plant	Solar system design (layout, electrical integration, safety compliance)	30%	10	Compliance-based; higher marks for superior specs (e.g., bifacial modules, advanced monitoring in inverters) Marks will be allotted on proportionate basis.
		PV Modules: Efficiency ≥22%, IEC 61215/61730 certified, 25-year warranty		10	
		Inverters: Efficiency ≥97%, IEC 62109/61727 certified, 10-year warranty		10	
4	Project Execution Plan	Project schedule & methodology	15%	5	Marks will be allotted on proportionate basis.
		Safety measures & QA/QC plan		5	Marks will be allotted on proportionate basis.
		Availability of skilled manpower and equipment, Qualification & experience of proposed project manager, structural engineer, solar engineer		5	Marks will be allotted on proportionate basis.
5	O&M Proposal	Maintenance plan, monitoring system, performance guarantee	10%	10	
	Total Marks		**100%**	**100**	

18. COMBINED EVALUATION:

A. Marks awarded by IIMB Committee will constitute 70% weightage and the total amount quoted by the bidder in the online price bid will constitute 30% weightage as enumerated below:

B. The marks awarded and the total amount quoted will be taken into account for the final selection of the bidder with a weightage of 70% (presentation marks) and 30% (total amount quoted). The weightage will be applied as per the example given below:

Let us assume 3 bidders participated in the bid and the marks scored by them in the presentation and the amount quoted by them are as below:

Sl. No.	Description	Marks Scored in the *Presentation*	Amount quoted in the price bid (Rs. in lakhs)
1	Bidder A	85	23.00
2	Bidder B	80	13.00
3	Bidder C	75	18.00

The maximum marks, i.e. 85 scoring points, will be given 100 percent and the percentage of the other Bidders will be worked out on proportionate basis and thereafter weightage of 70% will be applied on marks so obtained. Similarly, the minimum amount quoted i.e. Rs.13.00 lakhs will be given 100 percent and percentage of the other Bidders will be worked out on proportionate basis and thereafter weightage of 30% will be applied on the amount quoted. The Bidders will be ranked H1, H2 and H3 based on the calculation made for the marks obtained and amount quoted.

Bidder A – (85 / 85) x 70 + (13/23) x 30 = 86.95 marks
Bidder B – (80 / 85) x 70 + (13/13) x 30 = 95.88 marks
Bidder C – (75 / 85) x 70 + (13/18) x 30 = 83.44 marks

As per the weightage given, Bidder B gets the maximum marks and will be declared H1 on the basis of overall marks.

C. The decision of the IIMB in selection of the Bidder shall be final and binding on all the bidders.

D. IIMB decision in the selection process is final and IIMB will neither entertain any correspondence in this regard nor shall it be bound to furnish any explanation.

19. Even though any bidder satisfies the above requirements, he would be liable to disqualification if he has:

i) Made misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the pre-qualification document.

ii) Records of poor performance such as abandoning work, not properly completing the contract, or financial failures/weaknesses, etc. The bidder shall submit a self-declaration regarding this. Format of self-declaration is provided un Proforma L.

20. Bidder should provide information regarding any current litigation in case the bidder is involved. The details shall be submitted on the letterhead. If the bidder is not indulged in any litigation, he shall type 'NO LITIGATION' on the letterhead and submit with seal and sign. ***(Please see Proforma F for the format)***

21. EARNEST MONEY DEPOSIT:

A. The bidder shall submit the EMD through online transfer to IIMB or through Bank Guarantee.

a) Through Online Transfer - For online submission of EMD, the bidder shall pay the amount through RTGS/NEFT. The bank details of IIMB for online transfer:

Bank Name	: HDFC Bank Ltd
Bank Street Address	: J.P. NAGAR BRANCH, BANGALORE
Branch Code	: 0133
IFSC CODE	: HDFC 0000133
Customer HDFC Bank a/c name	: Indian Institute of Management
Customer HDFC Bank a/c number	: 01331450000019

Note: The proof of payment including name of the bank, amount of EMD, date of transfer, UTR No. shall be submitted along with the Tender in CPP Portal (in the field provided for uploading the EMD details).

b) Through submission of Bank Guarantee - The bidder may submit the EMD through Bank Guarantee valid for 120 days.

B. Exemption from paying the EMD:

Earnest Money Deposit is compulsory for all the bidders including State Government / Statutory Bodies / Enterprises / Undertakings etc.

Bidders may note the fact that their registrations with any authority including MSME/UDYAM/NSIC do not entitle them for exemption from payment of EMD.

C. NO INTEREST WILL BE PAID ON EMD DEPOSIT.

D. Any tender not accompanied by an Earnest Money Deposit and not secured in the payment modes as indicated above shall be rejected by the IIMB as non-responsive.

E. Forfeiture of EMD:

The Earnest Money Deposit shall be forfeited -

a) If the bidder withdraws from the Tender after tender opening during the period of tender validity

b) In the case of a successful bidder, if the bidder fails within the specified time limit to:

i) sign the Agreement within 15 days of issue of work order or
ii) commence the work as per schedule or
iii) produce the required documents to IIMB mentioned in this document

c) In case, the bidder, after quoting, withdraws from the tender or refuses/delays in commencing the work even after issue of work order, the EMD will be forfeited.

F. BANK DETAILS OF THE BIDDER:

The bidders are required to submit the bank details along with the Technical Bid. The bank details are required to be filled in and submitted in the company letterhead, duly attested by the authorised person of the company and the banker. The bank details should be accompanied by a cancelled cheque duly attested by the banker. **(The format of the Bidder Bank Detail Form has been given in this document under Proforma B).**

G. RETURN OF EMD:

(a) Bidders not qualified in the Technical Evaluation – EMD will be returned after approval of Technical Evaluation.
(b) Bidders who are unsuccessful in e-bidding – EMD will be returned after the issue of Work Order to L1 Bidder.

Successful Bidder:

In case of submission of EMD through Online Transfer:

EMD will be returned to the L1 bidder on submission of the Bank Guarantee at 5% (five percent) of the final bill value, which should be valid up to the completion of the warranty period plus two months.

In case of submission of EMD through Bank Guarantee:

The Bank Guarantee of the L1 bidder will be returned on submission of the Bank Guarantee at 5% of the final bill value valid till the completion of the warranty period plus two months.

22. In case the bidder stops the work abruptly, the security deposit submitted through EMD will be forfeited.

23. NOTE: IIMB will not ask for any deposit other than EMD either before or after the tender submission/opening. In case of any calls or mail received from any person demanding the payment of any money, the same shall be brought to the notice of the tender inviting authority. The contact numbers and email ids are mentioned on the first page of this document.

Either successful or unsuccessful bidder whoever receives the call shall not make any payment to such person. IIMB shall not be responsible for such calls or payment made if any by the bidder.

24. SUBMISSION OF BIDS:

The bidders should upload the soft copies of the supporting documents online in CPP Portal (**https://eprocure.gov.in/eprocure/app**).

A. Submission of EMD:

The details of payment of EMD shall be uploaded in CPP Portal which are as below:

In case of online transfer-

(i) UTR Number of the payment transaction
(ii) Bank Name, Date of transfer and amount of EMD paid

In case of submission of Bank Guarantee

(iii) Scanned copy of the Bank Guarantee in case of submission of Bank Guarantee)

B. Submission of Tender:

The following documents shall be signed with seal and uploaded under the field 'Mandatory Documents'.

- Supporting documents – copies with seal and sign on every page
- Proformas – printed on Letterhead and seal and sign
- Copy of the Site Visit Certificate issued by IIMB

C. Note: If these documents are not submitted, the bidder cannot complete the process of submission in the portal and his tender will be automatically treated as non-responsive and rejected.

D. Note: If any discrepancy is found in the documents submitted / if all the required documents are not submitted / if the documents are submitted in any other format, the prescribed authority may either ask for the documents or reject the tender. The decision is at the discretion of the employer.

25. OPENING OF BIDS:

The Technical Bids will be opened as under:

A. The Technical bids will be opened on the date and time mentioned in this document. Then the bids submitted will be evaluated for technical qualification.

B. The online Price Bids of the bidders who qualify in the Step-2 e will be opened.

26. REJECTION OF TENDERS:

A. Any tender which proposes any alterations to any of the conditions laid down or proposes any other conditions of any description whatsoever is liable to be rejected.

B. The bidders are cautioned that not giving complete information called for in the application or not giving it in clear terms or making any changes in prescribed forms or deliberately suppressing the information may result in the application being summarily disqualified / rejected.

27. The tenders submitted without furnishing the relevant information asked for, are summarily rejected.

28. Bidders shall not contact the Client on any matter relating to their bids from the time of opening of the Tender Document till the contract is awarded. If a bidder wishes to bring additional information to the notice of the client, it should do so in writing at the address indicated. Any effort by the firm to influence the Client in the Technical Bid Evaluation, Price Bid Comparison or Contract Award Decisions may result in the rejection of the bidder's Proposal.

29. DECLARATION OF H1 BIDDER:

The total amount quoted by the bidders for the supply and installation of the plant and the AMC for 5 years will be considered for the combined evaluation and the bidder who will be ranked H1 will be declared as successful.

Total amount quoted will be –

Cost of the project (Supply and Installation of the Plant)
+ AMC Cost for the 1st year
+ AMC Cost for the 2nd year
+ AMC Cost for the 3rd year
+ AMC Cost for the 4th year
+ AMC Cost for the 5th year

30. AWARD OF CONTRACT:

The work will be awarded to the bidder who will be declared H1 in the Combined Evaluation after opening the online price bids.

Work Order will be issued for the Value quoted for Supply and Installation of the plant.

Separate Work Order will be issued for the first year of maintenance contract, on the value quoted for First Year Maintenance Contract.

Separate work orders will be issued for second, third, fourth and fifth years of maintenance contract.

The accepting officer reserves the right to place order as a whole or part only as deemed fit.

31. Should a bidder find discrepancies or omissions in the tender documents or should be in doubt as to their meaning he should address the authority inviting tender, for clarification. Every endeavor is made to avoid any errors which can materially affect the basis of the tender, but the successful bidder shall take upon himself the risk of any error which may be subsequently discovered and shall make no subsequent claim on account thereof. The decision of the Engineer-in-charge shall be final and binding on the bidder in this respect.

32. Bidders shall not contact the Client on any matter relating to their bids from the time of opening of the Tender Document till the contract is awarded. If a bidder wishes to bring additional information to the notice of the client, it should do so in writing at the address indicated. Any effort by the firm to influence the Client in the Technical Bid Evaluation, Price Bid Comparison or Contract Award Decisions may result in the rejection of the bidder's Proposal.

33. No interest will be paid on any deposits made by the bidder.

34. In case of Discrepancy / Inconsistency between the Description in the Scope of Works, Specifications, Nomenclature of Items and / or the Drawings, Conditions of Contract, and if there are Varying or Conflicting Provisions made in any Document forming Part of the Contract, IIMB shall be the Deciding Authority with regard to the Intention / Interpretation of the Document and the decision of IIMB shall be final and binding on the bidders without any reservations.

II. GENERAL CONDITIONS OF CONTRACT

1. TIME IS THE ESSENCE OF THE CONTRACT.

Commencement of work: The commencement of work will be considered from the 1st day after issue of award of work to the Bidder and the Bidder shall complete the work within the stipulated timeframe.

2. <u>Definitions and Interpretation Clauses:</u>

In this tender document the following words shall have the meanings herein assigned to them:

A. "**INSTITUTE**", **"EMPLOYER"**, "**IIMB**" and "**ACCEPTING AUTHORITY**" shall mean "**Indian Institute of Management Bangalore**" Bangalore.

B. "BIDDER" shall mean one or more Bidder or Contractors jointly or generally engaged in the works to which these documents pertain to and shall include his / their heirs, executors and administrators.

C. "**ENGINEER**", "**ENGINEER-IN-CHARGE**", "**CONSULTANTS**", "**ARCHITECTS**" and "**CONSULTING ENGINEERS**" shall mean Engineer Representatives of IIMB and the Consultants appointed by IIMB for this specific project, including the Consultants representative.

D. "**WORKS SITE**" and "**SITE OF WORKS**" shall mean the extent of land which IIMB places at the disposal of the Bidder from time to time for the purpose of executing the contract works.

E. "As specified" or "As directed" or "As specified and directed as per specifications" include the entire contents of these documents and also the instructions issued by the Engineer-in-Charge from time to time during the execution of work.

F. "**BILL of QUANTITIES**" – This being the turn-key basis tender, the bidder shall enter the quantity and quote the item rate after making detailed engineering.

G. "**CONTRACT**" or "**TENDER**" shall mean the entire contents of these documents viz.,

i) Tender Notice
ii) Instructions to bidders
iii) Work order issued to the successful bidder
iv) General conditions of Contract
v) Special Conditions of Contract
vi) Technical Specifications
vii) Bill of Quantities (Price Bid)
viii) Minutes of the pre-bid meeting

ix) Any correspondence that will take place between the Bidder and IIMB from the time of submission of tender by the bidder till entering into agreement.
x) Letter communicating the acceptance of the Bidder submitted to IIMB

H. "Schedule" shall mean the probable bill of quantities.

I. "Scheduled Bank" means a bank included in the second schedule to the Reserve Bank of India Act 1934, or modification there to.

3. Contract Termination:

A. Termination: If the Contractor fails to perform the work set out in this Agreement within the stipulated period of time or carry out the work to the satisfaction of IIMB, IIMB shall terminate the Agreement as a whole or a part thereof at the risk and cost of the Contractor, without prior notice.

B. Consequence of Termination: In the event of termination of this Agreement, the parties agree to promptly fully deliver all the deliverables applicable conceived, created or developed prior to the date of termination.

In case of termination due to the material breach of the terms of this Agreement by the Contractor, IIMB shall get the balance work executed through a third party and recover from the Contractor all the additional costs incurred by and damage caused to IIMB in procuring such services from any other third party.

C. In case any of the information furnished by the Bidder is found to be false or any adverse points come to light subsequent to the Agreement, IIMB, at its discretion, may choose to terminate the Contract, at any time. The decision of IIMB in this regard shall be final and binding.

D. Termination of Contract for Death:

Without prejudice to any of the rights or remedies under this contract, if the Bidder dies or attains legal disability, the Accepting Officer shall have the option of terminating the contract without any compensation to the Bidder. IIMB shall have the right to get the work completed by itself, or through any other contractors or agency at the cost and risk of the contractors or his successors in interest.

E. Termination for Insolvency:

IIMB may at any time terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to IIMB.

F. Termination for Convenience:

IIMB, by written notice sent to the contractor, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify

that termination is for IIMB's convenience, the extent to which performance of the contractor under the Contract is terminated, and the date upon which such termination becomes effective.

4. Arbitration:

Except where otherwise provided for in the contract, all question and disputes relating to the meaning of the specifications, designs and instruction herein before mentioned and as to quality of workmanship or materials used on the work or as to any other question, claim, right matter or thing whatsoever in any way arising out of or relating to the contract, designs, specifications, estimates, instructions, orders or the conditions or otherwise concerning the works, or the execution or failure to execute the same whether arising during the progress of the work or after the completion or abandonment thereof shall be referred to the sole arbitration of the Director if the Director is unable or unwilling to act, to the sole arbitration of some other person appointed by the Director willing to act as such arbitrator. The arbitrator to whom the matter is originally referred to being transferred or vacating his Office or being unable to act for any reason such Director / aforesaid at the time of such transfer, vacation of Office or inability to act, shall appoint another person to act as arbitrator in accordance with the terms of the contract. Such person shall be entitled to proceed with reference from the stage at which it was left by his predecessor.

A. Subject to as aforesaid the provision of the Arbitration & Conciliation Act or any statutory modification or re-enactment thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this Clause.

B. It is a term of the contract that the party involving arbitration shall specify the dispute or dispute to be referred to arbitration under the Clause together with the amount or amounts claimed in respect of each dispute.

C. The arbitrator(s) may from time to time with consent of the parties enlarge the time, for making and publishing the award.

D. The work under the contract shall, if reasonably possible, continue during the arbitration proceedings and no payment due or payable to the Bidder shall be withheld on account of such proceedings.

E. The arbitrator shall be deemed to have entered on the reference on the date he issues notice to both parties / fixing date of the first hearing.

F. The arbitrator shall give a separate award in respect of each dispute or difference referred to him.

G. The venue of arbitrator shall be a place as may be fixed by the arbitrator in his sole discretion.

H. The award of the arbitrator shall be final, conclusive and binding on both the parties to this contract.

5. During the defects liability period / maintenance period, the bidder shall be responsible for making good, free of cost, all the defects or damages which occur due to defective workmanship / use of substandard materials. If the bidder fails to make good such defects or damages even after intimation to him within a reasonable time, IIMB shall get the same rectified as deemed fit at the contractors' risk and cost, and Bank Guarantee will be withheld until the cost incurred by IIMB is remitted by the contractor.

6. Several documents forming the contract are to be taken as mutually explanatory to one another.

7. However, the Engineer-in-charge shall be the sole deciding authority regarding the intention of the document and his decision in this respect shall be final and binding to the Bidder.

8. The bidder shall not increase his quoted rates at any time during the currency of the contract.

9. Canvassing in any form in connection with the tenders is strictly prohibited and the tenders submitted by the bidders who resort to canvassing will be liable to be rejected.

10. Whenever the Engineer-in-charge of the work feels it necessary and advises the bidder for production of bills for any materials whatsoever procured / purchased by the bidder for use and incorporation in the work, the bidder shall produce such bills in proof of such purchase / procurement from 17pprox.17 dealers/manufacturers. Such a demand for production of bill can be made by the Engineer-in-charge even after use and incorporation of such materials in the work, after clearance by the Engineer-in-charge for the quality of the materials. In the event of such a demand by the Engineer-in-charge for production of bills, the bidder shall not use and incorporate such materials in the work without the prior clearance in writing from the Engineer-in-charge. In case, the bidder fails to produce the bills or uses / incorporates the materials in the work against which bills are advised to be produced, without prior clearance of Engineer-in-charge, no payment against any work under the contract executed by the bidder shall be made.

11. The bidder must obtain for himself on his own responsibility and at his own expenses all the information which may be necessary for the purpose of making a tender and for entering into contract and must examine the entire tender document, inspect the site of the work and acquaint himself with all the information about scope and specifications of the work to be done, all his obligations under the contract, local, hydrological and climatic conditions, local and statutory/ Govt. rules and regulations, all other local conditions, means of access to the work, security requirements, restrictions in entry to the Project site, conditions of site of work, nature of the work and all matters pertaining thereto.

12. Access to the site will be given during the tender period by appointment on application to the authority issuing the tender. The bidder shall ascertain the location, size and condition of the areas available for his use as working areas and all other information affecting this tender.

13. IIMB shall not be responsible and shall not reimburse any expenses which may be incurred, or losses to person or property suffered by any bidder in connection with visits and examination of the site and in the preparation of his tender for submission.

14. The bidders must note that information, if any, regarding the site and local conditions, as contained in the tender document has been given merely to assist the bidders and is not deemed to be complete.

15. The bidders should note and bear in mind that IIMB shall bear no responsibility for the lack of acquaintance of the site and other conditions or any information relating thereto, on its part. The consequences of the lack of any knowledge, as aforesaid, on the part of the bidders shall be at bidders' risk and cost and no charges or claims whatsoever consequent to the lack of any information, knowledge or understanding shall be entertained or payable by IIMB either during tender stage or during the execution period.

16. Bidders are required to sign with seal on every page of the bid document and any common set of deviations / corrigendum / addendum issued by IIMB. All corrections in the bid documents must also be signed by the bidder. Such sealed and signed documents shall be submitted by the bidder on demand.

17. The rates to be quoted in tender shall be given in Indian Rupees.

18. Any Error in Description or any Omissions therefrom, shall not vitiate the Contract or release the Bidder from the Execution whole or any part of the Works comprised therein according to Drawings and Specifications or from any of his Obligations under the Contract.

19. In the event of a tender being submitted by a partnership firm, the tender must be signed separately and legibly by each partner or member of the firm, or, in their absence a person holding Power of Attorney on behalf of the firm concerned. In the latter case, a copy of the power of attorney duly attested by a Gazetted Officer must accompany the tender and certified true copy (attested only by Gazetted Officer) of the partnership deed must be enclosed along with the tender submitted by the partnership firm.

20. If the application is made by a limited company or a limited corporation, it shall be signed by duly authorized person holding the power of attorney which power of attorney shall accompany the application. Such limited company or corporation will be required to furnish satisfactory evidence of its existence before the contract is awarded.

21. On acceptance of the tender, the name of the accredited representative of the bidder who would be responsible for taking instructions from the Engineer-in-Charge shall be communicated by the bidder.

22. While quoting their rates, the bidders are advised to consider all factors of any fluctuations in the market rates, etc. No claims will be entertained on this account after acceptance of the tender or during the currency of the contract. Item rate tender containing percentage below / above will be summarily rejected.

23. Before Bidding, the bidders are advised to inspect the site of work and its environment and be well acquainted with the actual working and other prevalent conditions, position of materials and labour, specifications and all other documents which form part of the agreement to be entered.

24. IIMB reserves absolute right to appropriate, deduct, set-off or retain/withhold any amount payable to the bidder under any head of account including earnest money under this contract or any other contract or any other transactions against any sum, which in the opinion of IIMB is due to IIMB under any contract, deal or transaction whatsoever.

25. All compensation or other sums of money payable by the bidder under the terms of this contract may be deducted / recovered / adjusted from his security deposit (bank guarantee) or from any sum which may be due to or become due to bidder by Institute or any accounts whatsoever.

26. Security And Protection:

Should the work be suspended by reason of rain, strike, lockouts or any other cause, the Bidder shall at his cost take all precautions necessary for the protection of the work and shall make good any damage arising from any of these causes.

27. The Bidder shall work in coordination with the departmental staff of IIMB for the execution of the work.

28. Bids shall be deemed to be under consideration immediately after they are opened and until the official intimation of award of contract is made by IIMB to the successful Bidder. If necessary, IIMB will obtain clarification on the offers by requesting such information from any or all the Bidders, in writing as may be considered necessary, from time to time. Bidder will not be permitted to change the19pprox.t matter of their offer after the Tenders have been opened.

29. Under no circumstances will a father and his sons or other close relations who have business dealing with one another be allowed to tender for the same Contract as separate competitors. A breach of this condition will render both the parties disqualified from Bidding for the Contract.

30. If the bidder desires to entrust his affairs to any person, a power of attorney duly authenticated by a Magistrate / Notary / Court / Judge in favour of such person, shall be submitted to IIMB, acceptance of which shall be at the discretion of the Accepting Officer.

31. All notices, communications reference and complaints under this contract shall be made by sending email to the email ids mentioned in this document.

III. SPECIAL CONDITIONS OF CONTRACT

1. The Bidder shall deploy required No. of Technical Personnel for the smooth execution of the contract.

2. Site Visit:

The Bidder/s shall visit the site to acquaint himself / themselves with the site conditions and study the specifications in detail prior to Bidding and no claims will be entertained on the ground of ignorance or otherwise of the conditions under which the work shall have to be executed. No cost incurred towards site visit like travelling expenses and accommodation expenses can be claimed. Such expenses are entirely the responsibility of the bidder.

3. Site Supervision:

The Bidder shall either himself supervise the execution of the contract or shall appoint competent and experienced Engineers on his own for supervision of the work. Where the Bidder is not a qualified Engineer or even if he is so qualified but in the opinion of the Accepting Authority, cannot give full attention to the works, the Bidder shall at his own expense employ adequate Engineers, as indicated in manpower deployment schedule, to supervise the work and to receive instructions from the Engineer-in-Charge.

4. Work Schedule:

The work schedule shall be submitted on the enclosed activity schedule along with the equipment & manpower mobilization schedule envisaged for timely completion of work within the stipulated time for completion of work.

5. Materials supplied by the Bidder:

The Bidder shall furnish in accordance with Technical specifications enclosed with this tender.

6. Other materials:

All other materials required for the work shall also be supplied by the Bidder. These shall conform to appropriate Indian Standard Specification and procured from approved manufacturer.

7. Sub-Letting or Sub-Contracting by the Bidder:

The Bidder shall not sub-contract the whole of the works. Except where otherwise provided in the contract, the Bidder shall not subcontract any part of the works without the prior consent of the Engineer in writing. Any such consent shall not relieve the contract from any of his liability or obligation under the contract and he shall be responsible for the acts, defaults and neglects of any sub-bidder, his representative, servants or workmen as fully as if they were the acts, defaults or neglects of the bidder.

8. Works to be executed in Approved Manner:

The works, the subject of the contract, specified and provided for, or that may be necessary to be done to form and complete any part thereof, shall be executed and completed in the best and most substantial manner, with materials of the best and most approved quality of their respective kinds, agreeable to the particulars contained in or implied by the specification, or as referred to and represented by and memorandum thereon/or as referred to by any of the said further instructions and directions, and shall be to the full satisfaction of the Engineer. The Engineer shall have full liberty at all reasonable times to inspect and examine the works, materials and workmanship which to him, may appear defective, unfit or improper for the several purposes to which they are applied, or intended to be applied, or are not in accordance with the specifications of the said memoranda instructions or directions respectively and every such time reject any or all of such works, materials and workmanship.

9. Works To Be Carried With An Expedition Failing Which IIMB May Employ Contractors Without Vitiating The Contract:

The Bidder shall commence to carry on the works with due diligence, and as much expedition as the Engineer in charge may reasonably expect, having regard to the specified time of completion of the whole of the works. In case the Bidder fail to do so or neglect to provide proper and sufficient materials or to employ a sufficient number of workmen to execute the works then IIMB shall have full power, without vitiating contract, to take the works wholly or in part of the hand of the Bidder, to engage or employ any other person or workmen, and to procure all requisite materials and implements for the due execution and completion of the said works and the costs and charges incurred by IIMB in so doing shall be ascertained by the Accepting Officer and be competent for IIMB to deduct the amount of such costs and charges along with overheads out of any sum or sums due or to become due from IIMB to the bidder under this or any other contract.

10. Emergency Powers:

In the event of any accident or failure occurring in or on the works which in the opinion of the Engineer, requires immediate attention either during the construction or during the period of maintenance, IIMB may, by their own or other workmen make necessary repairs at the expense of the Contractors.

11. Precaution Against Injury To Property Adjacent To Works In Progress:

The Bidder shall take special care, by the erection of temporary fences, and by every other means which circumstances may render necessary to prevent all injury and damage to or trespass upon the lands, roads, fences or property adjacent to the site of works, and he shall confine the passage of his workmen to existing public roads and footpaths. He shall likewise pay and satisfy all claims whatsoever and from whomsoever, for temporary occupation, way leaves, damages, trespass or otherwise, in reference to the said lands, roads, fences and property adjacent, and

bear the company harmless from any and all such claims. If any greater extent of lands than the site or works be required by the Bidder for his operations, he shall obtain and occupy the same at his own cost and charge.

12. Precautions Against Accidents Or Injury:

The Bidder shall, at his own expense, share, protect, support, alter, restore, make good and maintain, as may be necessary, all buildings, water and gas pipes, sewage, drains, electrical cables and other things, which may be disturbed, exposed or injured during the execution of the works, or in consequences of the execution of the works and shall also provide for the continuous use of all buildings, pipes, sewers, drains, electric cables and other things, the use of which may be liable to interruption during the progress of the works. The Bidder shall at his own expense restore all such buildings, water and gas pipes, sewage, drains, electric cables and other things to the satisfaction of the owners thereof, and he shall likewise, at his own expense, construct and maintain such works as may be necessary for the due permanent support of all such buildings, pipes, sewage, drains, electric cables and any extra timbering which may be temporarily required, and all labour in fixing and removing the same and shall at his own expenses provide other things not within the construction of the works, and keep indemnified, the company and its officers from and against all actions, suits, claims, penalties, liabilities, costs, expenses and demands whatsoever, by reasons of on account of damages to such buildings, pipes, sewage, drains, electric cables and other things whether caused by the execution of the contract works or the insufficiency of the aforesaid permanent support. The company may deduct the expenses thereby incurred or to which the company or its officers may thereby be put or be liable, or which may be incidental thereto, from the amounts of any sum or sums due or to become due to the Bidder or may recover the same by action at law or otherwise from the Bidder, and the company may compromise any such action, suits, or other proceedings, or such items as it shall see fit and the Bidder shall thereupon forthwith pay the company the sum or sums paid by the company upon the occasion thereof and shall in every case pay such sum or sums and shall fully indemnify the company according to the present stipulation.

13. Extension Of Time:

If the Bidder shall desire an extension of time for the completion of the work on the ground of his having being unavoidably hindered in its execution in consequence of altered, additional or substituted work, or any other ground, he shall apply in writing to the Engineer in charge within seven days of the hindrance on account of which he desires such extension as aforesaid and the Accepting Authority shall, if in his opinion (which shall be final) reasonable grounds be shown therefore, authorize such extension of time, if any, as may, in his opinion be necessary or proper.

If the Bidder‘s work is unavoidably hindered in carrying out the designs / drawings on account of delayed decision or the approval by the IIMB which are necessary to carry out further work beyond the time specified, he shall be allowed suitable extension of time by IIMB whose decision shall be final and binding on the Bidder. No claim of any kind shall be entertained from the Bidder for such delayed approvals/decisions by the IIMB except request for suitable extension of time.

14. Rejected Material:

All rejected material will at once be removed from the site by the Bidder to such distance as may be desired.

15. Scope Of Completion:

Completion includes completion of all works in accordance with the tender conditions and specifications, removal of all yard mess accumulated during construction, cleaning up the site and generally cleaning the site.

On intimation from the Bidder about the completion, the works will be inspected by the Engineer-in-charge and a completion certificate will be issued.

16. Damage To Persons and Property

The Bidder shall be responsible for all injury to persons, animals or things and for all structural and decorative item, damages to property which may arise from the operation or neglect of himself or of any nominated sub-bidder or any employees, of either, whether sub injury or damage arises from carelessness, accident or any other cause whatsoever in any way connected with the carrying out of his contract and hold it harmless in respect of all and any expenses arising from any much injury or damage to persons or property as aforesaid and also in respect of injury or damage under any Act of any legislature or otherwise and also in respect of any award of compensation or damage consequent upon such claim.

17. Damage & Loss to Private Property & Injury To Workmen

The Bidder shall at his own expense reinstate and make good to the satisfaction of the Engineer-in-Charge, in respect of any such injury (including claim resulting in death), loss or damage to any person whosoever or property including all claims which may arise under the Workmen's Compensation Act or otherwise.

18. Attention:

1. The Bidder shall visit the site prior to tender, as no claims will be allowed on the ground of ignorance of the conditions under which work shall be executed.
2. Time will be the essence of the contract and the Bidder is to complete the whole of work in the time stated in the tender, subject to the schedule of conditions.
3. The Bidder is to provide at all times during the progress of work and the maintenance period proper means of access, with ladders, gangways etc., and the necessary attendants to move and adopt as directed for inspection of their representatives. No separate rate will be allowed.
4. The Bidder is to keep all persons under his control and within the boundaries of the site, and he will be held responsible for the care of the works generally until their completion including all works executed and materials deposited on the sites by himself or suppliers, together with all risks arising from weather, carelessness of apprentices, damage or loss by thefts or by any other cause and is to allow for all necessary watching and protective lighting.

19. Local Conditions:

A. Each Bidder shall acquaint himself with the local conditions and factors which would have any effect on the performance of the contract and the cost of items of work. IIMB shall not entertain any request for clarification from the Bidder regarding such local conditions. No request for change of price or time schedule for completion of work shall be entertained after the acceptance of offer by IIMB. The Bidder can visit the place of proposed work to understand the site conditions and correct appreciation of volume of work to be done.

B. In case any of the information furnished by the Bidder is found to be false or any adverse points come to light subsequent to the Agreement, IIMB, at its discretion, may choose to terminate the Contract, at any time. The decision of IIMB in this regard shall be final and binding.

20. Interested Bidders shall submit their offer as per the conditions set forth in the Tender document, which includes the stipulations contained in the GCC, SCC, Specifications, etc. or the latest correction slips, as amended from time to time, if applicable, which shall form part of the Contract.

21. Acceptance of Tender

A. IIMB may accept or reject any tender without assigning any reason whatsoever. The Bidder shall not demand any explanation for the rejection of his tender. Acceptance of tender will be communicated by a formal work order to the Bidder.

B. If the Bidder deliberately gives wrong information in his Tender and thereby create circumstances for the acceptance of his Tender, IIMB reserves the right to reject such Tenders at any stage.

C. The Successful Bidder shall execute a Contract with IIMB, for carrying out the Work. The address of the Contractor as given in the agreement will be deemed as their business address and all correspondence sent to that address by IIMB shall be deemed delivered to the Contractors in the ordinary course by post.

22. Adequate Safety Precautions shall be taken by the Contractor to ensure the Safety of the workmen engaged by him.

23. Power & Water as required for this contract will be arranged by IIMB.

24. Delay in work due to following reasons:

i. Force majeure, or
ii. Abnormal bad weather, or
iii. Serious loss or damage by the, or
iv. Civil commotion, local commotion of workmen, strike or lookout, affecting any of the trades employed or the work, or

v. Delay on the part of other contractors or tradesmen engaged by /Engineer-in-Charge in executing work not forming part of the Contract, or
vi. Non-availability of stores, which are the responsibility of Government to supply/or
vii. Non-availability or break down of tools and Plant to be supplied or supplied by Government or
viii. Any other cause which, in the absolute discretion of the Engineer-in-Charge is beyond the Bidder's control.

Then upon the happening of any such event causing delay, the Bidder shall immediately give notice thereof in writing to the Engineer-in Charge but shall nevertheless use constantly his best and endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.

Request for rescheduling the milestones and extension of time, to be eligible for consideration, shall be made by the Bidder in writing within fourteen days of the happening of the event causing delay on the prescribed form. The Bidder may also, if practicable, indicate in such a request the period of which extension is desired.

In any such case the Engineer-in-Charge may give a fair and reasonable extension of time and reschedule the milestones to completion of work. Such extension shall be communicated to the Bidder by the Engineer-in-Charge in writing, within 3 months of the date of receipt of such request. Non-application by the bidder to extension of time shall not be a bar for giving fair and reasonable extension by the Engineer-in-Charge and this shall be binding on the bidder.

In such case the Accepting Officer may grant fair and reasonable extension in the completion dates of individual items or work for which the separate period of completion is mentioned in the contract documents or work order as applicable. Upon the happening of any such event causing delay, the Bidder shall immediately give notice thereof in writing to Engineer-in-Charge but shall nevertheless use constantly his best endeavor to prevent or make good the delay and shall do all that may reasonably be required to the satisfaction of the Engineer-in-Charge to proceed with the works extension of time as granted above shall be communicated to the Bidder by the Engineer-in-Charge in writing and shall be final and binding.

No claims in respect of compensation or otherwise, however, arising as a result of extension granted shall be admitted.

25. FORCE MAJEURE:

If, at any time during the currency of the contract, the performance of any obligation (in whole or in part) by IIMB or the Bidder shall be prevented or delayed by reason of any war, hostilities, invasion, acts of public or foreign enemies, rebellion, revolution, insurrection, civil commotion, sabotage, large scale arson, floods, earth quake or any other act of God, large scale epidemics, nuclear accidents, any other catastrophic unforeseeable circumstances, quarantine restrictions, any statutory, rules, regulations, order or requisitions issued by a Government department or competent authority (hereinafter referred to as

"event") then, provided notice of the happening of such an event is given by either party to the other within 21 days of the occurrence thereof.

a. Neither party by reason of such event be entitled to terminate the contract or have claim for damages against the other in respect of such non-performance or delay in performance, if not covered under insurance.

b. The obligations under the contract shall be resumed as soon as practicable after the event has come to an end or cease to exit.

c. In case of doubt or dispute, whether a particular occurrence should be considered an "event" as defined under this, clause the decision of the Engineer shall be final and binding.

d. If the bidder is foreclosed under this clause, the Bidder shall be paid fully for the work done under the contract, but not for any defective work or work done which has been destroyed or damaged before its measurement. The Engineer shall have the option to take over any plant and material lying at site, at rates provided for in the contract, failing that, as per rates which are determined to be fair and reasonable by the Engineer.

If no notice is issued by either party regarding the event within 21 days of occurrence, the said event shall be deemed not to have occurred and the contract will continue to have effect as such.

26. PENALTY FOR DELAY IN EXECUTION:

In case of failure on the part of Bidder to complete the work and clear the site on or before the time stipulated in the contract or the extended date / period of completion, the Bidder shall, without prejudice to any other right or remedy of the Company on account of such breach, pay penalty as compensation @ **1.0 %** per week on unfinished work/balance work upto a maximum of **10 %** of the value of work order.

The amount of compensation may be adjusted or set off against any sum payable to the Bidder under this or any other contract with IIMB.

If the bidder makes good the shortfall on works within the stipulated time or extended time of completion, penalty may be refunded on receiving written application from the bidder.

27. CANCELLATION OF CONTRACT FOR BIDDER DEFAULT:

If the Bidder:

A. Makes default in commencing the work within a reasonable time from date of handing over of the site and continues in the state after a reasonable notice from EIC.

B. In the opinion of the Engineer-in-Charge at any time, whether before or after the date or extended date for completion, makes default in proceeding with the work, with due diligence and continues in that state after a reasonable notice from Engineer-in-Charge.

C. Fails to comply with any of the terms and conditions of the contract before or after reasonable notice in writing, orders properly issued thereunder, or

D. Fails to complete the work, work order and items of work with individual dates for completion and clear the site on or before the date of completion.

E. The Accepting Officer may, without prejudice to any other right or remedy which shall have accrued or shall accrue thereafter to IIMB cancel the contract as a whole or in part thereof or only such work order or items of work in default from the contract. Whenever the Accepting Officer exercises his authority to cancel the contract as a whole or in part under this condition, he may get completed the work at the Contractors risk and cost, provided always that in the event of the cost, of completion (as certified by Engineer-in-Charge which is final and conclusive) being less than the contract cost, the advantage shall accrue to the IIMB. If the cost of completion exceeds the money due to the Bidder under this contract, the Bidder shall either pay the excess amount ordered by Engineer-in-Charge or the same shall be recovered from the Bidder by other means.

In case IIMB completes the work or any part thereof under provisions of this condition the cost of such completion to be taken into account for determining the excess cost to be charged to the Bidder under this condition, it shall consist of the cost of materials purchased / and / or labour provided by IIMB which on addition of such percentage to cover superintendence and establishment charges as may be decided by the Engineer-in-Charge whose decision shall be final and conclusive.

28. FORECLOSURE OF CONTRACT FOR ADMINISTRATIVE REASONS:

IIMB reserves the right to terminate the contract at any time after acceptance of the tender if IIMB decide to abandon or reduce the scope of work for any reason whatsoever and hence not required the whole or any part of the works to be carried out, the Engineer-in-Charge shall give notice in writing to that effect to the Contractors. The compensation, if any payable for such foreclosure of work will be discussed mutually between IIMB and Bidder and settled after taking into consideration the loss suffered by Bidder on account of the foreclosure of the contract. The Bidder shall have no claim to any payment of compensation whatsoever on account of any profit or advantages which he might have derived consequent to foreclosure of the whole or part of the works. IIMB shall have the option to take over the Contractors materials or any part thereof, either brought to the site or to which the Bidder is legally bound to accept the delivery from the suppliers.

The amount of compensation payable to the Bidder due to foreclosure will be decided by the competent authority of IIMB.

29. MODIFICATION OF SPECIFICATIONS:

No modifications or changes of specification in the Bill of Quantities shall be accepted & such specifications and rates are liable to be rejected.

30. DEFECTS LIABILITY PERIOD:

Defects Liability Period / Maintenance Period commences from the date of successfully commissioning the plant and handing over. Defects Liability Period for five years should cover all manufacturing defects and quality issues. Any defects in the systems shall be repaired or replaced within the warranty period.

Performance Bank Guarantee: Performance bank guarantee shall be equivalent to five percent (5%) of the quoted value for a duration of five years.

The warranty period shall be as follows:

(a) Panel – 25 years
(b) Inverter and Optimiser – 10 years

Comprehensive maintenance of the systems shall be for five years.

Operation and maintenance of the systems on day-to-day basis shall be for the duration of one year from the date of handing over the project.

Operation and maintenance of the systems including equipment warranty shall be for the second to fifth year.

Total system up-time of 98% (ninety eight percent) should be maintained.

Any defect or damage arising solely due to faulty design, materials and workmanship, shall be repaired/replaced free of charge during warranty period.

During the warranty period, the firm shall ensure proper functioning of the systems. The contractor shall rectify the defects developed in the system on the same day without any delay.

The notice through email/hard copy to rectify the complaints will be issued by the Institute to the contractor.

A standby system with the manpower should be provided in the Institute for rectifying the defects immediately, without delay.

In the case of failure to replace/repair the defective system, Rs.1,000/- per day per system for the number of defective systems and for the number of days delayed, will be imposed on the contractor as Penalty and the amount will be deducted from the contractor's consecutive running bill.

31. PERFORMANCE BANK GUARANTEE

(a) The contractor shall submit Performance Bank Guarantee within 15 days after completion of the work, valid for 5 years of Defects Liability Period and AMC Period plus 2 months, @ 5% of the total value of the contract (value quoted towards Supply and Installation of the plant) excluding GST.

32. RESPONSIBILTY OF BIDDER AGAINST RISKS:

During currency of the contract it shall be the responsibility of the Bidder to safeguard all materials (tools, tackles, plant, equipment etc. either issued by IIMB or brought by the Bidder), against all losses, damages, on account of thefts shortages, fire or any reasons whatsoever and IIMB shall not be responsible for loss, damages etc. as aforesaid.

33. No Accommodation is available at the site of Work for Office, Residence, Labour, Store etc. and the Bidder has to make his own Arrangement and no Claim whatsoever on this account shall be entertained.

34. Bidder shall make his own arrangement for the Disposal of the Spoils from the Works to such Place where the same shall not cause Nuisance and shall be acceptable to the Authorities concerned.

35. The contractor should depute a technician for the operation and maintenance of the system on daily basis and at the end of every month, a report should be submitted on the power generated and any maintenance work carried out.

36. Approval by IIMB Structural Consultant: Agency shall submit structural design calculations to IIMB approved consultant for approval. Only after necessary approval, the agency shall take up the fabrication work.

37. Wherever necessary, the bidder shall provide necessary details/drawings etc to statutory authorities for their permissions with regard to execution of works. The design should be such that it meets the local byelaws requirements. This includes any clarifications/modifications and coordinating with various agencies and authorities.

38. TAXES & DUTIES:

A. Tax rate applicable at the time of raising invoice will be paid by IIMB.

B. Any other new taxes and levis after tender opening will be borne by IIMB.

C. GST shall be paid to the Bidder as charged in the Bills raised by the bidder subject to proof of payment of GST to IIMB. The bidder shall obtain registration under the Goods and Services Tax Act and furnish the GST registration number. In

case of failure to furnish the GST Registration document, the GST will not be reimbursed.

39. PAYMENT TERMS:

The percentage of payment for this project shall be broken up in stages as detailed below:

A. 70% of the total amount quoted for Supply will be released against supply of materials at site, against submission of Delivery Challans with IIMB security seal and signature on the same.

B. 20% of the balance of Supply amount and 90% of the total amount quoted for Installation will be released after completion of installation and commissioning of the plant.

C. Balance 10% of the supply and installation amount will be released against submission of as-built drawings and Performance Bank Guarantee for the Defects Liability Period.

40. For claiming the payments, the following documents are required to be submitted:

a. Invoice with HSN Code, GST No. of the bidder, IIMB GST No.
b. Delivery Challan / Bills in duplicate duly pre-receipted

41. Procedure for submission of the Invoice:

A. The contractor shall submit all the invoices pertaining to the supplies made in a particular month enclosed with a single bill for that month before 25th of that month.

B. The contractor shall submit maximum of 4 invoices till the period of completion i.e. 4 months.

i. 3 monthly bills to be submitted each month and
ii. 4th being the final bill to be submitted after completion of work

C. These invoices shall have entry seal and sign of the Entry Gate Security. Two DC along with Invoice with seal and sign on security. In the absence of the same, such invoices will not be considered.

D. The bill will be checked, certified and sent to Accounts Section for processing the same for payment.

E. The payment will be made online to the bank details provided by the contractor, within thirty (30) working days after submission of the undisputed invoice.

F. To ensure uninterrupted payment of bills-

(i) the contractor should update his bank details, the business details regarding the changes if any.

(ii) the invoice shall be submitted with proper GST numbers of both IIMB and the contractor.

(iii) the bill shall be submitted before 25th of the month.

42. Documents to be submitted along with the final bill:

a. Test Certificate
b. As-built Drawings
c. Warranty Certificate

43. RECOVERY FOR ANY OVER-PAYMENT MADE

Should there be any overpayments made inadvertently to the Bidder on this account or in any other contract, the IIMB shall recover such amount from the Bidder either by deducting the amount from any sums that may due or may become due to the Bidder by the IIMB on any account whatsoever from this or any other contract or from the security-cum-earnest money deposit made by the Bidder.

44. ABANDONMENT OF WORK:

That if the Bidder abandons the work for any reasons whatsoever or becomes incapacitated from acting as aforesaid, IIMB may make full use of all or any of the drawings & details prepared by the Bidder and that the Bidder shall be liable to **refund all the Excess amount paid to him up to that date** plus such damage as may be assessed by the IIMB subject to a maximum of 10% of the total amount payable to the Bidder under this agreement. Further the IIMB shall be entitled to make use of all or any drawing(s), designs or other documents prepared by the Bidder.

Provided, however that in the event of the termination of the agreement being under proper notice as provided in the clause hereinafter, the Bidder shall **be liable only to refund any excess payment made to** him over and above which is due to him in accordance with the terms of this agreement for the services performed by him till the date of termination of agreement.

If the Bidder closes their business or abandons the work or if this agreement is terminated as provided for in clause hereinbefore, the IIMB shall be entitled to make use of all or any drawing(s), designs or other documents prepared by the Bidder.

45. IIMB may have the details & designs submitted by the bidder inspected at any time by any officer nominated by the IIMB any external agency who shall be at liberty to examine the records, drawings etc. The above inspection

by IIMB does not absolve the Bidder of his responsibility. The Bidder shall remain solely responsible for all the services rendered by him.

46. IIMB or any officer nominated by IIMB will have the liberty to meet Bidder at mutually agreed meeting time and shall be at liberty to inspect and examine their designs in their office.

47. The Bidder shall be fully responsible for the work including the technical soundness of the designs, and shall assume full responsibility for the system

IV. SCOPE OF WORK:

1. Technical:

A. Location – IIMB Banner Road Campus, Hostel -Q Block.

B. System type: **180 kWp grid-connected** rooftop solar photovoltaic (PV) power plant.

C. Scope: Design, engineering, manufacture, Procurement, supply, installation, testing, and commissioning on of roof top solar power plant on elevated MS Galvanized structure at a height of 8 feet on turnkey basis, including Structural, electrical, and related minor civil works.

D. The equipment and materials for 180 kWp Grid Interactive Solar PV Power Plant with associated system (Typical) shall include but not be limited to the Supply, Erection, and Testing & Commissioning of the following:

- Solar PV modules, of suitable rating in each array.
- Solar PV modules in array totaling 180 kWp including mounting frames, structures, array foundation and module inter connection.
- Inverters and DC optimizers
- Array Junction boxes, distribution boxes and Fuse boxes. MCBs, Surge Arrestors
- Online monitoring system using mobile app / system-based software for module level monitoring. Data acquisition system with remote monitoring facilities.
- Metering and protection
- LT Power and Control Cables including end terminations and other required accessories for both AC & DC power
- Lighting arrestors.
- PVC pipes and accessories/trenches
- Tool kit and Earthing kit
- Testing, maintenance of equipment and Mandatory spares for 5 years
- Any other equipment / material required to complete the 180 kWp Solar Power Plant.
- Receipt, unloading, storage, shifting, erection, testing and commissioning of all supplied material.

E. Design of 8 feet elevated structure for installing 180 kWp Grid Interactive Solar Power Plant and its associated electrical & mechanical systems includes the following.

- Design of modular elevated structure.
- Structural design calculations
- Fabrication and erection of structure.
- Submission of Single line diagram, Layout plan, earthing layout
- Earthing design and calculations.
- Any other relevant drawings and documents required under this contract.

F. The items of civil erection work shall be performed with respect to the following but not limited to:

- Elevated structure and related civil foundation work.
- Solar PV Array.
- Power Cables
- Civil foundation work of mounting structures etc.
- Entire GI cable tray
- Fabrication, supply & erection of cable trays, support, brackets and accessories.
- Galvanized steel rigid / flexible conduits and accessories, Hume pipes, ferrules, lugs, glands, terminal blocks, cable fixing clamps, nuts and bolts etc. as required.

Any other items not specifically mentioned in the specification, but which are required for erection, testing and commissioning and satisfactory operation of the solar power plant are deemed to be included in the scope of the specification unless specifically excluded.

Materials and accessories, which are necessary or usual for satisfactory and trouble-free operation and maintenance of the above equipment.

Construction Power & Water as required for this contract will be arranged by IIMB.

G. Submission of following documents drawings data design and engineering information to IIMB or its authorized representative for review and approval in three copies.

- Detailed technical specifications of all the equipment.
- Design criteria.
- Design calculations.
- General arrangement and assembly drawing.
- Solar Insolation Data
- Schematic diagram for entire electric system
- G.A. drawings for all types of structures, LT Panels
- Quality assurance plans.
- Test report (for type, acceptance, and routine tests).
- O&M Instructions manuals and its drawings.

H. All drawings shall be fully corrected to agree with the actual "as built" site conditions and submitted to IIMB after commissioning of the project for record purpose.

I. The contractor shall forward to IIMB, schedule for various activities in the form of PERT Chart within a week from the date of issue of work order.

J. The contractor shall provide a detailed training plan for all operation, maintenance procedures, which shall after approval by IIMB, form the basis of the training program. The contractor shall also be responsible for training of IIMB staff.

K. The contractor shall establish a system to maintain an inventory of spare parts and tools, equipment, consumables and supplies for the facilities and operation.

L. The contractor shall employ and coordinate the training of personnel who will be qualified and experienced to operate and monitor the facility and to coordinate operations of the facility with the grid system.

M. The contractor shall take CAR policy and provide adequate insurance coverage during project execution period.

N. The contractor shall maintain accurate and up-to-date operating logs, records and monthly reports regarding the Operation & Maintenance of facility.

O. The contractor shall perform or contract for and oversee the performance of periodic overhauls or maintenance required for the facility in accordance with the recommendations of the original equipment manufacturer.

P. Procurement for spares parts, overhaul parts, tools, equipment, consumables, etc. required to operate and maintain the project in accordance with the prudent utility practices and having regarded warranty recommendations are the responsibilities of the contractor.

Q. The contractor shall hand over the system to maintain an inventory of spare parts, tools, equipment, consumables and supplies for the facility's operation along with the required inventory to maintain the facility for five years.

R. The contractor shall keep in stock the required spares and consumables.

S. Quality Spares & Consumables

In order to ensure the longevity and safety of the core equipment and optimum performance of the system the contractor should use only genuine spares of high quality standard.

T. Tools and Tackles

The Contractor shall arrange for all the necessary tools and tackles for carrying out all the maintenance work covered under this contract.

2. Annual Maintenance Contract:

A. Regular monitoring of the plant in online mode on daily basis

B. Any issues related to performance of the plant are observed should be attended within 24 hours of the issue.

C. Monthly manpower to be deployed for cleaning and checking the system at site once in a month.

V. TECHNICAL SPECIFICATIONS

1. SECTION – I

Module Mounting Structure

A. DESCRIPTION OF WORK – DESIGN AND MANUFACTURING

- Design, optimizations, Manufacture, Supply, along with design of foundation for Installation of PV Module Mounting Structure (MMS) and Installation supervision for admin Block and Hostel Blocks
- Uniformly designed mounting structure for each roof as mentioned in the subsequent sections shall be provided.
- The Design shall be done as per relevant Indian codes & specifications for applicable wind & other loadings
- Module mounting structures shall be designed to facilitate easy replacement of solar PV Module if required in future
- Module structures shall use module manufacturer recommended installation accessories like mounting clips, rails, racks etc. Fasteners used for module fixing and other hardware used for support structure shall be SS304.
- The mounting structure should be checked for stability with minimum deflection and sagging. Maximum permissible limit for sagging shall in compliance to the relevant Indian code & Module manufacturer's installation guideline.
- Design calculation to be submitted for all types of proposed MMS solutions along with connection details & Fasteners used in MMS.

B. DESCRIPTION OF WORK – SUPERVISION

- MMS Installation supervision to be done by the bidder.
- No on-site fabrication will be permitted; all the structure members shall be factory fabricated & only assembled at site.
- Detailed General arrangement drawing, fabrication drawings of the support shall be prepared by the vendor and submitted for approval from I
- Any damage to Galvanizing/ anodizing of the structure during transportation or installation shall be rectified by bidder
- Bidder shall provide proper identification and marking of the structure along with hardware's and other accessories at site during installation to ensure traceability of the members/items as per drawings.

i) Standards to be followed for Structure and foundation design:

Sl No	Standard Name
1.	IS875-parts I-IV
2.	IS800-2007
3.	IS808
4.	IS1730
5.	IS816
6.	IS2062
7.	IS2629

8.	IS4777
9.	IS9172
10.	ISO 9223 & ISO 9224
11.	IS811 AND IS4923
12.	IS:2911(Part2)-2000
13.	IS:2911(Part1/ sec3)-1979
14.	IS:2131-1981
15.	IS:456-2000

ii) For the location of the site, PV to be installed on the terrace of the building at 15m above ground level, wind speed for the location 120kmph, category 3 and Class A for the structure design needs to be considered. Coefficients need to be considered assuming structure as free canopy roof at 13degree inclination. Wind Load combination factor of 1.5 needs to be considered for design.

iii) The structure design shall be appropriate and innovative and must follow the existing building structure and profile.

iv) The structure shall be designed to allow essay replacement of any module and shall be in line with site requirements.

v) Design drawings with material selected shall be submitted for prior approval of IIMB within 15 days of detailed order.

vi) The structure shall be designed for simple mechanical and electrical installation. It shall support SPV modules at a given orientation, absorb and transfer the mechanical loads to the ground properly.

vii) The array structure shall be so designed that it will occupy minimum space without sacrificing the output from SPV panels at the same time.

viii) Nut & bolts, supporting structures including Module Mounting Structures shall have to be adequately protected from atmosphere and weather prevailing in the area.

ix) All fasteners shall be of stainless steel of grade SS 304.

x) The array structure shall be grounded properly using maintenance free earthing kit.

xi) The bidder/manufacturer shall specify installation details of the PV modules and the support structures with appropriate diagram and drawings.

xii) The drawings along with detailed structure design and material selected and their standards shall be submitted in four sets to IIMB for approval before starting the execution work. The work will be carried out as per design approved by IIMB.

xiii) The frame should be resistant to ammonia and salt corrosion as demonstrated by certification to IEC 60068-2-60 and IEC 61701.

C. QUALITY

Upon short listing of fabricators / manufacturers, contractor shall demonstrate the quality of supply with a sample mounting structure duly assembled with PV modules as per approved designs. This shall essentially include the following:

- Ease in erection and alignment of structure and PV modules.
- Examining modules under stress and sagging effect along the length and width of mounting structure.
- Quality evaluation will be carried out by an independent agency on the sample supplies and installation.
- In case of unsatisfactory supply and workmanship, method of rectification shall be proposed by the manufacturer.
- IIMB shall reserve the right to accept rectification plans or out rightly reject the part of full supply.
- For assured quality work, bidder shall provide laboratory test certificates as specified below.
- Relevant material test certificates shall be submitted.

2. SECTION – II

A. TECHNICAL SPECIFICATION FOR SPV POWER PLANT

SPV modules to be supplied should have minimum declared output of **600 Wp** or more. Number of modules to be supplied shall be worked out accordingly.

i) Stabilized output of the Solar Power Plant should not be less than 180 kWp, under Standard Test Condition after one year of operation.

ii) Peak power point voltage and the peak power point current of any supplied module and/or any module string (series connected module) shall not be more than 3% from the respective arithmetic means for all modules and/or for all module strings, as the case may be.

iii) Each module shall have superior light transmission.

iv) The module frame shall be made of aluminum or corrosion resistant material, which shall be electrically compatible with the structural material used for mounting the modules.

v) Solar modules offered shall be certified as per IEC 61215-Edition –II and IEC 61730-1, -2 amended up to date or equivalent Standard.

vi) SPV module shall be 600 or above W N-Type TopCon, Dual glass , Bifacial panel. The panel shall have surface anti-reflective coating to help to absorb more light in all weather conditions.

vii) Solar PV module array shall consist of high efficiency Solar Modules utilizing Crystalline Silicon Solar PV cells. Power output Guarantee offered for the SPV Module shall not be less than 25 years. Individual Solar Module rating shall not be less than 600Wp at Standard test conditions.

viii) Crystalline high-power cells shall be used in the Solar Photovoltaic module. Solar module shall be laminated using lamination technology using established polymer (EVA or POE).

ix) The solar modules shall have suitable encapsulation and sealing arrangements to protect the silicon cells from the environment. The arrangement and the material of encapsulation shall be compatible with the thermal expansion properties of the Silicon cells and the module framing arrangement/material. The encapsulation arrangement shall ensure complete moisture proofing during life of the solar modules.

x) Photo conversion efficiency of SPV Module should be greater than **22%.** Module shall be made of high transmissive glass front surface giving high encapsulation gain.

xi) All materials used shall be having a proven history of reliable, light weight and stable operation in external outdoor applications and shall have service life of more than 25 years.

xii) Module rating is considered under standard test conditions, however Solar Modules shall be designed to operate and perform under site condition including high temperature, dust (sometimes).

xiii) Solar PV Module design shall conform to following Mechanical requirement:

- Toughened, low iron content.
- High transmissive front and back glass.
- Anodized Aluminum frame
- Ethyl Vinyl Acetate (EVA) or Poly Olefin elastomers encapsulant
- Silicon edge sealant around laminate
- Weatherproof DC rated MC connectors and a lead cable coming out as a part of the module, making connections easier and secure, not allowing for any loose connections.
- Resistant of water, abrasion, hail impact, humidity & other environment factor for the worst situation at site.

xiv) The offered module shall have a Power warranty of 25 years with degradation of power generated not exceeding 16% of the minimum rated power over the 25 years period and not more than 8% after ten years period.

xv) The bidder shall give the procedure for claiming the warranty and conditions covered under the warranty claim.

xvi) Each module shall have heat strengthened glass front and back for strength and superior light transmission.

xvii) The fill factor of module shall not be less than 0.70 (typical). The V-I curve of each PV module with Sl. Nos. should be submitted along with Modules meeting the required specifications.

xviii) Minimum following parameters should be provided in the bid documents:

- Maximum Power - Pmax
- Minimum Power - Pmin
- Open Circuit Voltage - Voc
- Short Circuit Current - Isc
- Voltage at Max Power - Vmp
- Current at Max power - Imp
- Fill Factor - FF
- Efficiency of cell - η_c
- Efficiency of module - η_m

xix) Bidder shall provide data sheet for Solar PV Module (Under Standard Testing Condition) along with their offer as per Guarantee Technical Particular Data Sheet-I.

xx) Entire drawings, detailed test reports of the offered modules should be submitted for approval of **IIMB** within 15 days from the date of placement of order and supply should start thereafter.

xxi) TESTING, CERTIFICATION & QUALITY ASSURANCE

- Every module shall be factory flash tested at Standard Test Conditions according to IEC 60904 to determine the peak rated nominal power output and then sorted into 5-watt bin increments.

- Module flash test data must be made available by serial number through the manufacturer's enterprise resource program (ERP) to the customer upon request.

- The factory flash tester shall be a Pasan Triple A rated flasher.

- Only modules that have greater than or equal to the nameplate rated power are to be placed into the corresponding bin.

- The module power tolerance will be -0 / +10Wp

- The module manufacturer must be certified to the TUV Power Control program which verifies flasher measurements for the modules.

- Each module must have an electro-luminescence image taken for cell quality verification before being packaged for sale.

- The solar laminate shall use a highly UV resistance encapsulant (EVA) that can withstand over 3,000 Kw/m2 radiation for wavelengths 280 to 400 nm.

- The module serial number and manufacturer's name shall be incorporated beneath the glass inside the laminate construction and visible from the front side of the module.

xxii) CERTIFICATION – PRODUCT

- DIN EN / IEC 61215 IEC 61730 Rated to 1500 V .: Crystalline silicon terrestrial photovoltaic modules – design qualification and type approval

- DIN EN 61730 incl. PC II: Photovoltaic (PV) module safety qualification – Part 1: Requirements for construction

- DIN EN 61701: Salt mist corrosion testing of photovoltaic modules (very well suited for use near the coast)

- IEC 62716 : Ammonia resistance (very well suited for use in agricultural operations)

- IEC 60068-2-68: Dust resistance (very well suited for use in dusty areas near deserts)

- Quality Certs ISO 9001:2015, ISO 14001:2015

- EHS Compliance ISO 45001-2018, Recycling Scheme

- LeTID Test TUV 2fg 2689/04.19 (LeTID Detection)

- PID Test IEC 62804

- Type: 600 to 730 W N-Type TopCon, Dual glass, Bifacial panel (Tier-1, IEC certified).

- Certifications: IEC 61215, IEC 61730, IEC 61701 (Salt Mist), IEC 62804 (PID).

B. PV ARRAY CONFIGURATIONS:

The Solar array shall be configured in multiple numbers of sub-arrays, providing optimum DC power to auditable number of sub arrays. The bidder shall submit their own design indicating configuration of PCU and respective sub arrays and bill of material.

C. JUNCTION BOX:

- The junction box shall be Outdoor, dust, vermin, and waterproof and made of ABS Plastic.
- The terminal will be connected to copper bus-bar arrangement of proper size to be provided. The junction boxes shall have suitable cable entry points fitted with cable glands of appropriate sizes for both incoming and outgoing cables.
- Suitable markings shall be provided on the bus-bars for easy identification and cable ferrules will be fitted at the cable termination points for identification. The junction box shall be Protection IP 65.
- The junction box shall be weather resistance, water tight, UV and microbe resistance and shall meet the requirements of IEC 61215 and UL 1703
- Each Array junction Box will have suitable Reverse Blocking Diodes of maximum DC blocking voltage of 1000 V with suitable arrangement for its connecting. The Array junction Box will also have suitable surge protection. The junction Boxes shall have suitable arrangement for the followings (typical):
    - Combine groups of modules into independent charging sub-arrays that will be wired into the controller.
    - Provide arrangements for disconnecting for each of the groups.
    - Provide a test point for each sub-group for quick fault location.
    - To provide group array isolation.
    - The current carrying rating of the junction boxes shall be suitable with adequate safety factor to interconnect the Solar PV array.
- Glans used for cable entry / exist – Nylon/ Polyamide – IP68 rated Mechanical Strength – IK08 or better.
- Protection devices: String fuses (positive & negative) – Gpv type, IEC 60269-6.
- Surge Protection Device (SPD) – Type 2 DC SPD as per IEC 61643-31
- DC MCB/Isolator/Disconnector – as per IEC 60947-3
    - Busbars/Terminals: Tinned copper
    - Earthing: Earth bus provided

D. POWER CONDITIONING UNIT (PCU) – INVERTER

i) Power Conditioning Unit (PUC) is critical equipment in Grid Connect SPV Power plant. This equipment converts DC power generated by SPV array, into 3 phase voltage AC to be connected to Grid. It also provides necessary protections for Grid Synchronization and Data Logging/Monitoring. Required inverters should be string inverters, three phases. They should convert DC power produced by SPV modules into AC power and adjust the voltage & frequency levels to suit the local grid conditions.

ii) The DC energy produced has to be utilized to maximum and supplied to the DC bus for inverting to AC voltage to extract maximum energy from solar array and provides 415VAC/ (+15% to – 10%), 3-ph 50Hz to synchronize with local grid.

iii) The PCU should be of very high quality, having efficiency not less than 96% and shall be capable of running in isolated mode.

iv) The PCU shall have protection features such as, over current, short circuit, over temperature to name a few.

v) The PCU shall be designed for continuous, reliable power supply as per specification.

vi) The PCU should be designed to be completely compatible with the SPV array voltage and grid supply voltage.

vii) The dimension, weight foundation details etc. of the PCU shall be clearly indicated in the detailed technical specification.

viii) It should have user friendly LEDs/LCD display for programming and view online parameters such as:

- DC power input,
- DC input voltage,
- DC current,
- AC power output,
- AC voltage (all the 3 phases and line)
- AC current (all the 3 phases and line)
- Power factor
- Inverter on
- Grid on
- Inverter under voltage/over voltage
- Inverter overload
- Inverter over temperature.

ix) The PCU shall have arrangement for adjusting DC input current and should trip against sustainable fault downstream and shall not start till the fault is rectified.

x) The 3 phase Grid connect PCU shall be from reputed firms, which will incorporate latest Technological advance to provide highly reliable and efficient energy conversion from DC to AC.

xi) Both AC&DC lines shall have suitable fuses and contactors to allow safe start up and shut down of the system.

xii) Fuses used in the DC circuit should be DC rated.

xiii) The PCU shall have provision for input & output isolation. Each solid-state electronic device shall have to be protected to ensure long life of the inverter as well as smooth functioning of the inverter.

xiv) The PCU shall be capable of complete automatic operation, including wake-up, synchronization & shut down.

xv) PCU shall be capable of synchronizing independently & automatically/ to be phase locked and BESCOM grid power line frequency to attain synchronization and export power generated by the solar panel to BESCOM grid.

xvi) Built in with data logging to remotely monitor plant performance through external PC shall be provided (PC shall be provided along with SPV Plant).

xvii) Inverter shall be tested for islanding protection performance.

xviii) Protections:

- Over voltage both at input & output.
- Over current both at input & output.
- Over/under grid frequency.
- Over temperature.
- Short circuit.
- Protection against lightning.
- Surge voltage induced at output due to external source.

xix) Typical failure analysis report of PCUs and recommended list of critical components shall be provided by the bidder while submitting their offer.

xx) The PCU shall be capable of operating in parallel with the grid utility service and shall be capable of interrupting line fault currents and line to ground fault currents.

xxi) The PCU shall be able to withstand an unbalanced load conforming to IEC standard and relevant Indian electricity condition. The PCU shall include appropriate self-protective and self-diagnostic features to protect itself and the PV array from damage in the event of PCU component failure or from parameters – beyond the PCU's safe operating range due to internal or external causes. The self-protective features shall not allow signals from the PCU front panel to cause the PCU to be operated in a manner which may be unsafe or damaging. Faults due to malfunctioning within the PCU, including commutation feature, shall be cleared by

the PCU protective devices and not by the existing site utility grid service circuit breaker.

xxii) The PCU shall go to shutdown/standby mode, with its contacts open, under the following conditions before attempting an automatic restart after an appropriate time delay. When the power available from the PV array is insufficient to supply the losses of the PCU, the PCU shall go to standby/shutdown mode. The PCU control shall prevent excessive cycling of shut down during insufficient solar radiance.

xxiii) Galvanic isolation is required to avoid any DC component being injected into the grid and the potential for AC components appearing at the array.

xxiv) Disconnection of the PV generator in the event of loss of the main grid supply is to be achieved by inflicts protection within the power conditioner. This may be achieved through rate of change of current, phase angle, unbalanced voltages, or reactive load variants.

xxv) Operation outside the limits of power qualify as described in the technical data sheet should cause the power conditioner to disconnect the grid. Additional parameters requiring automatic disconnection are –

- Neutral voltage displacement
- Over current
- Earth fault
- And reverse power

In each of the above cases, tripping time should be very less.

xxvi) Detailed technical description of the complete unit of offered PCU should be furnished with bid document. Following Technical documents of PCU shall be supplied for approval after placement of order.

- Detailed technical description of the complete unit
- Instructions for installation and operation
- Electrical diagrams of all internal cabling, necessary for installation, maintenance and fault finding.
- Description of electrical and mechanical characteristics of units.
- Maintenance and fault-finding procedures.
- Safety precautions.
- Software for data monitoring with detailed description.
- Details of data acquisition
- Factory test reports in detail on various parameters.

- Troubleshooting procedures.

- All maintenance requirements and their schedules, including detailed instructions on how to perform each task.

- Detailed schematics of all power instrumentation and control equipment and subsystems along with their interconnection diagrams. Schematics shall indicate wiring diagrams, their numbers and quantities, type and ratings of alt components and subsystems.

- A detailed bill of materials which shall list components' model numbers, quantities and manufacture of each supplied item.

- All documents and write ups shall be in English. They shall be clean and legible, and must be checked, signed, approved and dated by a competent representative of the contractor.

xxvii) Inverter shall be compatible with DC optimizer.

DC Optimizer

- **Inverter with DC optimizer**

  - DC optimizer shall be used along with inverter. Each panel (or pair of panels) should have DC optimizer attached. Optimizer performs MPPT individually per panel/ Module
  - Conditioned DC power is sent to the inverter, which only converts DC to AC.
  - DC optimizer should enable Panel-level monitoring (voltage, current, power). Online monitoring of each module (voltage, current, power, temperature).
  - DC optimizer should enable easier troubleshooting and maintenance.
  - Each optimizer should shut down to 1 V DC in case of emergency or maintenance.
  - Compatibility: Must be compatible with proposed inverter(s).
  - Efficiency: ≥99.5% MPPT efficiency, ≥98% weighted efficiency
  - Certifications: IEC 62109, UL 1741 (or equivalent).

E. DATA MONITORING OF POWER PLANTS

The performance and generation data is recorded using a data logger. The monitoring system shall comprise of the following main components:

- PCU to log the inverter performance data and transmits the same to the Data logger.

- Data logger gathers information and monitors the performance of the inverter. It shall support measurements from external sensors. The data will be made available to IIMB office at Bangalore via modem. Computers and other accessories required at IIMB office shall also be in the scope of this tender.

- PC Data logging software should enable automatic long-time storage of measured data from PV-Plant. It should allow visualization, monitoring, commissioning and service of the installation.

- Communication interface the entire system can be operated and monitored via various interface viz. (RS232, RS485, MPI, Profit-bus, Telephone modem), in addition to the information indicated on the operator panel.

- **Module Level Monitoring System is required.**

- **All the inverters should be switched off during load on generators through remote / online (wireless) system.**

F. LT POWER INTERFACING PANEL

i) The panel shall have adequate inputs to take in from individual PCUs & adequate outputs to Existing Main LT Panel.

ii) The panel shall be outdoor duty, floor mounted type and shall have all the measuring instruments such as voltmeter, ammeter, frequency meter, Electronic Energy Meter {for measuring the deliverable units (KWh)}.

iii) The panel shall fit with suitable rating & size copper bus, MCCB, fuses/circuit breaker/isolator, indicators for all incomer and outgoing terminals, LED voltmeter & Ammeter with suitable selector switches to monitor & measure the power to be evacuated.

iv) Nut & bolts including metallic shall have to be adequately protected against atmosphere and weather prevailing in the area.

v) The overall dimension shall be fit with other Power Conditioning Units of the Solar Power Plant, the dimensions, weight, sheet thickness, painting etc. should be indicated by the Contractor.

G. EARTHING

i) Earthing system installation shall be in strict accordance with the latest editions of Indian Electricity Rules, relevant Indian Standards and code of practices and the local statutory authority regulations.

ii) Neutral points of system metallic enclosures and framework, not forming part of electric supply shall be connected to main earthing system.

iii) **Earthing Layout:**

The contractor shall submit to IIMB earthing drawings showing the location of earthing conductors for their approval. Earthing conductors in outdoor areas shall be buried 600 mm below finished graded level and these buried conductors shall be brought 500 mm above ground level to make tap connections to the equipment.

H. Earthing System

i) The earthing for LT side (Solar Power Plant side) array and LT power system shall be as required as per provisions of Indian Standard/International Standard. Necessary provision shall be made for bolted isolating joints of each earthing pit for periodic checking of earth resistance.

ii) Each array structure of the SPV Yard shall be grounded properly. The array structure are to be connected to earth pits as per IS standards.

iii) The earthing for the power plant equipment shall be made with as per provisions of IS. Necessary provisions shall be made for bolted isolating joints of each earthing pit for periodic checking of earth resistance.

iv) The complete earthing system shall be mechanically & electrically connected to provide independent return to earth. All three-phase equipment shall have two distinct earth connections.

v) For each earth pit, necessary Test Point shall have to be provided.

vi) In compliance to Rule 33 and 61 of Indian Electricity Rules, 1956 (as amended up to date) all non-current carrying metal parts shall be earthed with two separate and distinct earth continuity conductors to an efficient earth electrode.

vii) Earth resistance of the earth pits shall be tested in presence of the representative of **IIMB.**

I. Location of Main LT Panel from Roof Top:

Distance: Length between LT Panel to the location of output of the power plant connected is 150 mtrs.

The panel is located at the basement of the building.

This shall be considered while preparing the design and quoting the rates.

Minimum 2 runs of cable (Main Cable and Standby) must be considered from the Roof Top LT Panel to the main LT Panel.

J. Location of Earth Pits:

Distance: Distance from Roof Top to earth pit location is 150 mtrs.

K. Specification of DC Cables

i) Conductor specifications

- **Material:** The conductor is made of high-purity, soft-annealed, electrolytic tinned copper strands. The tin plating provides superior corrosion resistance,

which is essential for outdoor applications and protection against potential hydrolysis.

- **Construction:** Class 5 fine stranding, as per IEC 60228, provides exceptional flexibility for easy handling and routing during installation.

ii) Insulation and sheathing

- **Insulation material:** The core insulation is made from electron-beam cross-linked polyolefin (XLPO) or cross-linked polyethylene (XLPE). This material is halogen-free (LSOH/LSZH), which is crucial for fire safety as it emits low smoke and no toxic gases in the event of a fire.

- **Sheath material:** An outer sheath of UV-stabilized, weather-resistant XLPO or PVC compound is applied over the insulation. The UV stabilization prevents material degradation from sun exposure.

iii) Electrical specifications

- **Rated DC voltage:** 1.5 Kv DC (conductor to conductor or conductor to earth).
- **Maximum permitted DC voltage:** 1.8 Kv.

- **Test voltage:** Cables should be tested at high voltage to ensure insulation integrity, typically at 6.5 Kv AC or 15 Kv DC.

- **Insulation resistance:** High insulation resistance, rated at over 1000 MΩ·km,

iv) Mechanical and environmental performance

- **Temperature rating:**
  - **Ambient:** -40°C to +90°C.
  - **Maximum conductor temperature:** 120°C (for 20,000 hours).
  - **Short-circuit temperature:** 250°C (for 5 seconds).

- **UV and ozone resistance:** The sheath and insulation shall be resistance to UV radiation, ozone, oil, and chemicals.

- **Fire performance:** The cables shall be flame-retardant and meet standards like EN 60332-1-2. The halogen-free compound also ensures low smoke emission (per EN 61034-2) for enhanced safety.

- **Weather resistance:** Should be resistant hydrolysis, damp heat, and general weathering.

v) Standards and certifications

For use in India, the cables must adhere to the Solar DC Cable and Fire Survival Cable (Quality Control) Order, 2023, and bear a license from the Bureau of Indian Standards (BIS).

- **BIS:** IS 17293:2020 for Electric Cables for Photovoltaic Systems for Rated Voltage 1500 V DC.

3. SECTION – III

A. TECHNICAL SPECIFICATION FOR REMOTE MONITORING SYSTEM

i) Basic Features of Remote Monitoring System

- Remote monitoring of the performance of inverters and external sensors via a web browser (Cloud based monitoring system)

- The system should use a combination of DC power optimizers and a centralized inverter, with the Monitoring Platform for module-level data monitoring. The architecture must collect performance data from each panel individually and give real-time insight into their system's health.

ii) Monitoring platform specifications and features

- The platform must offer the following.

a) Data and reporting

- **Module-level data:** Should display real-time and historical performance data for each solar panel, including energy production, voltage, and current. This pinpoints exactly where any performance issues are occurring.

- **Comparative analytics:** Should provide graphical and statistical tools to compare the performance of different modules, strings, and entire systems over various time periods.

- **Key Performance Indicators (KPIs):** Should enable the calculation and tracking of KPIs like the system's performance ratio (PR) and the environmental impact, including CO2 savings.

b) Alerts and diagnostics

- Automated fault detection: Should continuously analyse performance metrics and automatically detect anomalies or faults and send automated alerts to installer.

- Remote troubleshooting option should be there.

4. SECTION -IV

A. Elevated structure:

- The work includes design, supply, fabrication, galvanization, transportation, and erection of a **modular elevated Mild Steel (MS) galvanized structural frame** to support a rooftop solar power plant. The structure shall be installed at **8 feet clear height above existing roof level**, suitable for carrying solar PV modules and associated loads.

- The structural system shall be **factory-fabricated**, modular in design, and hot-dip galvanized for corrosion resistance.

B. STRUCTURAL DESIGN REQUIREMENTS

- **Design Standards:** IS 800, IS 875 (Part 1, 2 & 3), IS 2062, IS 808, IS 1161, IS 4923, IS 4759.

- **Design Load Conditions:**

    - Dead load of steel and solar PV modules.
    - Live load as per IS 875.
    - Wind load as per IS 875 Part 3 (site-specific wind speed to be considered).
    - Seismic considerations as per IS 1893.

- **Factor of Safety:** As per IS codes.

- Structure shall be designed for **minimum 25 years' service life** with adequate corrosion protection.

C. MATERIAL SPECIFICATIONS

- **Structural Steel:**
    - Rolled sections: IS 2062 E250 (or higher grade).
    - Hollow/pipe sections: IS 1161 / IS 4923.

- **Fasteners:** High tensile steel bolts, nuts, and washers conforming to IS 1367 / IS 3757.

- **Welding Electrodes:** Conforming to IS 814.

- **Protective Coating:** Hot-dip galvanization as per IS 4759, minimum zinc coating thickness 80 microns.

D. FABRICATION & MODULAR CONSTRUCTION

- Structural members shall be **factory fabricated** in modular sections for easy transportation and assembly at site.

- Cutting, drilling, welding, and finishing shall be carried out in controlled workshop conditions.
- All holes for bolted connections shall be pre-drilled in the factory.
- Welding shall be minimized at site; erection to be carried out using bolted connections.
- Tolerance in fabrication shall be as per IS 7215.

E. GALVANIZATION & SURFACE PROTECTION

- All fabricated members shall be hot dip galvanized after fabrication.
- Minimum zinc coating thickness: **80 microns**.
- Coating uniformity, thickness, and adhesion shall be tested as per IS 2629 / IS 4759.
- Damaged galvanization, if any, shall be repaired with zinc-rich paint conforming to IS 104.

F. ERECTION AT SITE

- Structures shall be erected on RCC foundations / pedestals designed to suit the building roof.
- Base plates with gussets and anchor bolts shall be provided.
- Grouting of anchor bolts to be done with non-shrink grout.
- Modular erection system to minimize on-site welding and maximize bolted assembly.
- Alignment and plumbness shall be checked and verified before final tightening of bolts.

G. QUALITY ASSURANCE & INSPECTION

- Factory inspection of fabricated members before galvanization.
- Testing of galvanization thickness.
- Verification of dimensions and alignment at site.
- Contractor shall submit detailed fabrication drawings for approval before execution.

H. DELIVERABLES FROM CONTRACTOR

- Detailed design calculations and GA drawings.
- Fabrication drawings for approval.
- Material test certificates (steel, bolts, etc.).
- Galvanization test reports.
- Erection methodology.
- As-built drawings after completion.

I. ERECTION, INSTALLATION, TESTING AND COMMISSIONING

The scope covers all activities related to the **erection, installation, testing, and commissioning** of a rooftop solar power plant with materials supplied by the Employer/Client. Work includes but is not limited to:

- Safe unloading, handling, and shifting of materials to the rooftop.
- Assembly and installation of module mounting structures.
- Fixing of solar PV modules on mounting structures with approved fasteners.
- Installation of inverters, junction boxes, cables, conduits, and protection devices.
- Proper earthing and lightning protection work.
- Interconnection of AC and DC sides as per approved drawings.
- Final testing, synchronization with grid, and assistance in net-metering.

J. GENERAL REQUIREMENTS

The contractor shall deploy trained and experienced manpower for erection work.

- All tools, plants, lifting equipment, scaffolding, PPEs, and safety gear shall be arranged by the contractor.
- Work shall be carried out in compliance with relevant IS/IEC standards, electrical safety codes, and local DISCOM guidelines.
- The contractor shall ensure no damage or leakage to the rooftop during erection activities.
- Workmanship shall be neat, professional, and subject to inspection/approval by the Engineer-in-Charge.

K. ERECTION WORK – DETAILED SPECIFICATIONS

a) Module Mounting Structure (MMS)

- Structures supplied by client shall be assembled, aligned, and securely fixed to the rooftop as per design.
- Bolts, nuts, and fasteners to be tightened with torque wrenches to manufacturer's recommendations.
- Structures to be installed with correct tilt angle and orientation.
- Roof penetration (if required) to be sealed properly with water-proofing compound.

b) Solar PV Modules

- Modules to be lifted carefully without causing stress or micro-cracks.
- Fixed to MMS using SS/Aluminium fasteners with rubber washers to prevent damage.
- Module earthing to be done with Aluminium cable as per the specification.

c) Inverters & Electrical Equipment

- Inverters, LT panels, AC/DC junction boxes to be mounted on suitable frames/walls.
- All terminations to be crimped, ferruled, and dressed neatly.
- Cable trays/conduits to be fixed properly with clamps/supports.

d) Cabling & Terminations

- DC cables to be routed separately from AC cables with proper identification.
- Cables laid in conduits/trays without sharp bends or mechanical stress.
- MC4 connectors to be used for module interconnections.
- Proper earthing of DC and AC side equipment to be ensured.

e) Earthing & Lightning Protection

- All MMS, modules, and equipment to be connected to the earthing system.
- Earth resistance to be measured and demonstrated ≤ 1 ohm.

- Lightning arrestor to be erected as per drawings.

L. TESTING & COMMISSIONING

- Continuity, polarity, and insulation resistance tests of DC/AC circuits.
- Verification of inverter settings and protections.
- Synchronization with grid in presence of authorized personnel.
- Submission of test reports for approval.

M. SAFETY & QUALITY CONTROL

- Contractor shall strictly follow safety standards (IS 376, IS 732, IS 3043, CEA Regulations).
- All work at height to be carried out with full-body harness, lifeline, and helmets.
- Daily housekeeping and safe disposal of scrap material.
- Work to be executed as per approved erection drawings.

N. DELIVERABLES FROM CONTRACTOR

- Erection schedule and daily progress reports.
- Test reports for earthing, insulation, and continuity.
- Completion certificate after commissioning.

LIST OF RECOMMENDED MAKES

S.No	ITEMS	VENDORS
1	MODULE	ADANI, WAAREE, SUNPOWER, VIKRAM SOLAR, TATA POWER SOLAR
		EMVEE SOLAR, NAVGRUN
2	INVERTER and Optimizer	SOLAR EDGE
3	LT POWER AND CONTROL CABLES	a) UCL
		b) POLYCAB
		c) FINOLEX
		d) KEI
4	METER	a) AEP
		b) IMP
		c) MECO
		d) KAPPA
		e) As preferred by BESCOM
5	CT	a) KAPPA
		b) SILCON
		c) PRAYOG
		d) PRAGATI
		e) CANDS
		f) PRECISE
6	PT	a) KAPPA
		b) SI LCON
		c) PRAYOG
		d) PRAGATI
		e) CANDS
		f) PRECISE
7	FUSES	a) GEC
		b) SIEMENS
		c) L&T
		d) STANDARD
		e) BUSSMANN
8	MCCB	a) ABB
		b) SCHNEIDER
9	MCB	a) MDS
		b) SIEMENS
		c) SCHNEIDER
		d) ABB
10	CONDUIT	a) SENCO / Anchor
		b) National
		c) VIP
11	CABLE LUGS	a) DOWEL
		b) CROWN / NIKO
		c) FORWARD ENGG.
12	DC CABLES	a) LAPP

VI. PRICE BID:

A. There are 8 columns numbered 1 to 8 in the BOQ sheet.

B. Columns 1 and 3 are specified by IIMB. The units are fixed by IIMB.

C. Some Specifications under column 2 are specified by IIMB. Whereas some specifications are to be entered by the bidders. The cells where specifications are to be entered will be unlocked and coloured and other cells where specifications are fixed by IIMB will be locked and not coloured.

D. All the cells under Columns 4, 5 and 7 are to be entered by the bidders.

E. The BOQ has items vide Sl. Nos. 8, 9, 10, 11, 14, 15, 16 and 21 which contain different capacities. The bidder may quote for any one capacity and leave others blank.

F. The items other than sl. Nos. 8, 9, 10, 11, 14, 15, 16 and 21 should not be left blank. If any of these items are left blank, the total quoted amount will be deemed as inclusive of all the items and the items left blank if any, other than Sl. Nos. 3, 4, 8, 9, 10, 11, 14, 15, 16 and 21 will not be paid extra.

G. The bidder shall enter the specifications in the cells under Sl. Nos. 3a, 3b (any one of the two), 4a, 4b, 4c (any one of the three).

H. Cells under Sl. Nos. 27, 28 and 29 are left blank. The bidder may enter the specifications in these cells, enter the quantities and quote the rates for these items if additional items are required as per the bidder's design. In case the bidder does not have any extra item to add in the BOQ, he may leave these cells blank.

I. Note:

- If the executed quantity is less than the quantity mentioned in the BOQ the excess amount paid will be recovered in the final bill.
- The rates should be quoted online as per the instructions given in the e-Bidding Conditions mentioned in this document.

J. Adherence to Approved Design and BOQ Quantities

The bidder shall visit and study the site and prepare the structural and system design. The quantities specified in the Bill of Quantities (BOQ) shall be strictly based on such design.

After award of contract, the successful bidder shall submit the detailed structural design to IIMB Consultant for approval. If any changes are suggested by the consultant in the design assumptions (safety factor, wind load etc), necessary changes shall be incorporated before execution. However, no changes in the BOQ with respect to description or quantity shall be permitted.

The Contractor shall ensure that the quantities quoted and the corresponding values for each item do not exceed the approved design specifications.

Any deviation from the approved quantities resulting in excess execution shall be solely at the risk and cost of the Contractor. IIMB shall not be liable to make any payment for quantities executed beyond those entered in the BOQ. No claims for extra payment on account of such excess quantities shall be entertained under any circumstances.

K. Instructions on Tender Uploading on CPP Portal:

E-Bids are invited through the electronic tendering process and the Tender Document can be downloaded from the e-Tender Central Public Procurement Portal (CPPP) of Government of India, https://eprocure.gov.in/eprocure/app. The submission of e-Bids will be only through the e-Tender portal https://eprocure.gov.in/eprocure/app Bids will not be accepted in any other form.

The prospective bidders should adhere to deadlines specified in Tender Details Screen corresponding to this Tender on E-Tender portal https://eprocure.gov.in/eprocure/app.

General Instructions to Bidders:

1) For participation in e-procurement all bidders need to enroll themselves on the CPP Portal (https://eprocure.gov.in/eprocure/app). Only enrolled/registered bidders with the said portal shall be allowed to participate in the e-tendering process.

2) Tender Documents may be downloaded from Central Public Procurement Portal https://eprocure.gov.in/eprocure/app. Aspiring Bidders who have not enrolled/ registered in e-procurement should enroll/ register before participating through the website https://eprocure.gov.in/eprocure/app. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission'.

3) Tenderers can access tender documents on the website (For searching in the NIC site https://eprocure.gov.in/eprocure/app, kindly go to Tender Search option, select tender type and select ' Indian Institute of Management Bangalore' in department type Thereafter, Click on "Search" button to view all I Bengaluru tenders). Select the appropriate tender and fill them with all relevant information and submit the necessary documents online on the website https://eprocure.gov.in/eprocure/app as per the schedule.

4) The Bidders should have Java 8 update 231 version-32 bit for uploading the bid in the CPP Portal.

5) IIMB neither operates nor manages the CPP Portal where online bids are submitted and therefore will not be responsible for any technical issues related to bid submission (viz., being not being able to upload bid, blank/missing/part

documents etc.). If the bid is incomplete on account of this, it will be treated as such and evaluated further. For any technical queries/issues related to online bid submission, Bidders must directly approach the support service of CPP Portal as per the details given on their website.

Bill of Quantity (BOQ)- Price bid:

Bidders should necessarily submit their price bid in the format provided and no other format is acceptable. The prices mentioned in BOQ shall be considered for evaluation and comparison of bids. Bidders are required to download the BOQ file, open it and complete the Blue coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

Submission of Online Bids:

1) Bids shall be submitted online only at CPPP website https://eprocure.gov.in/eprocure/app.

2) Bids received by Manual/ Offline bids /E-mail shall not be accepted under any circumstances.

3) The Bidder shall download the Tender Document directly from the website https://eprocure.gov.in/eprocure/app and shall not tamper/modify it in any manner. In case the same is found to be tampered/modified in any manner, such Tender/Bid will be summarily rejected and EMD would be forfeited.

4) The complete bidding process is online. Bidders should be in possession of a valid Digital Signature Certificate (DSC) of class III for online submission of bids. Prior to bidding DSC needs to be registered on the website mentioned above.

5) Bidders are advised to go through "Bidder Manual Kit" & "FAQ" links available on the login page of the e-Tender portal for guidelines, procedures & system requirements. In case of any technical difficulty, Bidders may contact the help desk numbers & email ids mentioned at the e-tender portal. Every Bidder will be required to obtain a Class-III Digital Signature Certificate (DSC) for submission of Bids.

6) IIMB shall receive the bids online through CPPP portal only. The e-Tender portal shall automatically stop accepting bids after the scheduled date and time specified in the Tender Document. Partially submitted bids shall be treated as invalid and shall not be processed.

7) **Due date for Submission of Bids:**

i) EMD must be paid through online transfer as per the bank details mentioned in this document within the due date of submission of bids.

ii) **Bidders are advised to upload, submit and freeze their E-bids** within

the due date for submission of E-Bids in view of the electronic process so as to avoid last minute issues.

iii) IIMB may, at its discretion, extend the deadline for submission of bids by amending the bid documents in accordance with Clause relating to Amendment of Bidding Documents in which case all rights and obligations of IIMB and Bidders previously subject to the deadline will thereafter be subject to the due date as extended.

8) Late Submission of EMD:

i) Any EMD received by the IIMB after the due date for submission of bids prescribed by the IIMB is liable to be rejected.

ii) Bidders must note that the e-tender portal shall not permit uploading of bids after the scheduled time of submission.

9) Withdrawal, Substitution and Modification of Bids:

i) The bidder may withdraw or resubmit the modified bid his digitally signed bid after submission prior to the deadline for submission of bids, through provisions of e-tendering portal. For this, the bidder shall go to 'My Active Bids' and either withdraw or resubmit the modified bid.

10) Opening of E-Bids:

i) The E-bids shall be opened online by authorized officials of IIMB as per schedule given in the Tender Notice. In the case of two bid tender, the Price bid of only those bidders who qualified in technical evaluation, shall be opened.

ii) In the event of the specified date of Bid opening being declared a holiday for IIMB, the Bids shall be opened at the appointed time on the next working day. In two bid system, the price bid shall be opened only after technical evaluation. No separate intimation shall be sent to the bidders in this regard.

iii) Since E-bid is an online process, the E-bid opening or any other process may be delayed due to any technical/server issue. If any such issue arises, this shall not be tantamount to the process delay and IIMB shall not be responsible for the same.

iv) On opening of technical bids online, accepting the bid will not mean that the firm is technically or financially qualified.

v) Bids will be opened online on the specified date and time. There is no need to visit IIMB premises to attend bid opening. If the bids cannot be opened on the due date and time due to any technical or administrative issues (network/connectivity issues, holidays, office closure etc.) the bids will be opened as soon as the issue is resolved or next working day as the case may be. Bids submitted online on CPP portal are safe, secure, and confidential and can be seen only after opening following the due process.

PROFORMA – A

UNDERTAKING LETTER

(Please submit in office letterhead with technical bid with date)

To

Chief Manager (Infrastructure)
Indian Institute of Management,
Estate & Maintenance Section
Bannerghatta Road,
Bangalore – 560 076

Work:

Dear Sir,

This has reference to your above Notice inviting the tender (NIT) published in your IIMB web site.

We hereby state that we M/s _____ have submitted the above tender documents duly filling at the appropriate places without making any alterations, corrections, omissions in the tender issued by the IIMB.

Signature & Name of the Bidder

PROFORMA – B

BIDDER BANK DETAIL FORM

(Please submit in office letterhead with technical bid with date)

The Indian Institute of Management Bangalore
Bannerghatta Road
Bangalore – 560 076

Dear Sir,

I / We hereby request you to remit our payments to our bank account as per the details furnished below:

Sl.No.	Particulars	Particulars
1	Name of the Agency/Organization	
2	Complete Address	
3	Name of the Contact Person	
4	Contact Numbers E-mail id	
5	Savings / current account number	
6	Name of the Bank	
7	Name of the branch with complete address	
8	IFSC Code	
9	GST Number	
10	PAN Number	

I / we hereby declare that I /we are authorized to sign this form and that the particulars furnished above are correct and complete in all respects. If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information, I /we shall not hold IIMB responsible.

Authorised Signatory:
Name:
Designation:
Date:

PROFORMA C

DECLARATION LETTER

(Please submit in office letterhead with technical bid with date)

To

Chief Manager (Infrastructure)
Indian Institute of Management Bangalore
Estate & Maintenance Section
Bannerghatta Road,
Bangalore – 560 076

Work:

Dear Sir,

Please find herewith enclosed the Technical Bid document comprising of Terms & conditions, General & Special Conditions and Safety Code relating to the works specified in the Technical Bid Document hereinafter set out and having acquired the requisite information relating thereto as affecting the Technical Bid, I / We hereby offer to execute the works specified in the said document with the labour/worker rates mentioned at Price Bid portion of Technical Bid Document and in accordance in all respects with the instructions, general conditions of contract, special conditions, , articles of agreement, general conditions of contract, annexures, safety condition, technical specifications, and in all other respects in accordance with such conditions so far as they may be applicable.

The document being read and understood all the contents of the Technical Bid Document do hereby accept all the Terms and conditions laid down in the said Technical Bid document and will abide by the same on acceptance and award of work.

Yours Faithfully,

FOR M/s_____

PROFORMA D

BIDDER CREATION TEMPLATE

(Please submit in office letterhead with technical bid with date)

Bidder Name	
PAN number	
GSTIN	
TAN Number	
Address	
Email Id	
Phone number	
Bank Name	
Branch Name	
Benefeiciary Name	
Bank Account Number	
IFSC Code	
Organisation Type (whether Individual, corporation etc)	
Applicability of E-Invoicing (Yes/No)-(If No, please fill Proforma E)	

(The rows and columns can be adjusted by the bidder according to the length of the information).

PROFORMA E

Declaration On Non-Applicability Of E-Invoicing Provisions Under GST

(Please submit in office letterhead with technical bid with date)

Date:

The Chief Finance Officer
Indian Institute of Management Bangalore
Bannerghatta Road
Bangalore – 560076
GSTIN: 29AAAAI0405N1ZQ
PAN: AAAAI0405N

Sub : Declaration on non-applicability of e-invoicing provisions under GST

We, (name of the bidder), with PAN ……..., having our registered office at……., hereby declare that our aggregate turnover as per Goods and Services Tax (GST) law in India is less than INR 10 crores and we are not required to comply with the e-invoicing provisions under GST for generation a Unique Invoice Registration Number (IRN) and QR code.

Further, we also undertake that if the aggregate turnover of M/s. (name of the bidder), exceeds the current threshold or revised threshold notified by Government of India at any future date, then we shall issue documents in compliance with the GST provisions.

This statement is true and correct and we agree to compensate you for any demand, credit reversal, denial of refund, loss, interest or penalty imposed due to any incorrect declaration or non-compliance by us.

Thanking you,

Yours faithfully,
For (Bidder Name)

(Signature)

Name of the Authorized signatory
Designation
Contact no.:
e-mail ID:

PROFORMA – F

LITIGATION DETAILS (COURT CASES/ARBITRATION)

(Please submit in office letterhead with technical bid with date)

Year Name of the work

Name of the Client, with Address

Title of the court Case/Arbitration

Detail of the Court/ Arbitrator

Status Pending/ Decided

Disputed Amount (Current Value, the equivalent) in case of Court Cases/arbitration

Actual Awarded Amount (Rs) in decided Court Cases/arbitration

Signature and seal of Authorized Signatory of bidder

PROFORMA – G

DECLARATION REGARDING BLACKLISTING / DEBARRING FOR TAKING PART IN TENDER

(Please submit in office letterhead with technical bid with date)

I / We …….. ***(name of the bidder)*** hereby declare that the bidder / bidder namely M/s …….. ***(name of the bidder of the bidder)*** has not been blacklisted or debarred in the past by Union / State Government or organization from taking part in Government tenders in India and should not have any litigation in any of the labour courts.

OR

I / We …… ***(name of the bidder)*** hereby declare that the bidder / bidder namely M/s …….. ***(name of the bidder of the bidder)*** was blacklisted or debarred by Union / State Government or any organization from taking part in Government tenders for a period of …….. years w.e.f. ……. To …… The period has been completed on …… and now the bidder / bidder is entitled to take part in Government tenders.

I case the above information is found false, I / We are fully aware that the tender / contract will be rejected / cancelled by the Institute and the EMD submitted by the bidder will be forfeited.

In addition to the above, Institute will not be responsible to pay the bills for any completed / partially completed work.

Seal and Signature of the bidder

PROFORMA H **SHEET-I**

Guaranteed Technical Particular data Sheet for Solar PV Module

S. No	Particulars	Unit	Type/value
1	PV Module Manufacture Name & Country		
2	PV Module Type (N-Type TopCon , Dual glass , Bifacial panel)		
3	Product Code		
4	Product Status	Standard	
5	No. of PV cells per Module		
6	Mounting arrangement for Solar Module		
7	Solar Module frame material		
8	Module dimensions		
9	Output Cables (viz., Polarized Weather Proof DC rated multi-contact connector)		
10	Weather resistant HDPE Junction Box (IP65)		
11	Construction front back		
12	Temperature rise of solar cells under severe working conditions over Max. Ambient Temp.		
13	Nominal voltage		
14	Nominal Wattage		
15	Power Tolerance (3%)		
16	Peak power voltage (Vmp)		
17	Peak power current (Imp)		
18	Open circuit voltage (Voc)		
19	Short circuit current (Isc)		
20	Weight of each module (Kg)		
21	Fill Factor		
22	Standards/Approvals from International Agencies	IEC 61215/IEC 61730 TUV	
23	Module is suitable to operate at 50^{0} Ambient	Yes/No	
24	Cell efficiency	%	
25	Module efficiency	%	
26	Guarantee Performance Ratio		

PROFORMA I

SHEET-II

Technical Particular Data Sheet for Power Conditioning Unit

AC Side	Unit	Value
Nominal AC power		
Output AC voltage		
Frequency		
Total Harmonic Distortion		
AC over / under voltage over /under frequency protection		
Phase shift (cos phi)		
DC Side		
PV power		
Maximum DC voltage		
MPPT voltage range		
Maximum DC current		
DC over voltage protection		
No of MPPT / Inverter		
No of inputs / MPPT		
Minimum Efficiency (CE)		
Ambient temperature range		
Humidity (non-condensing)		
Quiescent power		
Degree of protection		
Dimensions 72pprox.. (HXWXD)		
Weight		

PROFORMA J

LIST OF SIMILAR WORKS HANDLED (MINIMUM THREE WORKS)

(Please submit on the plain paper along with the Technical Bid)

Sl. No.	Clients Name, Address & Telephone/email Id	Details of Work & Place	Plant Capacity	Value of Work	Period of completion as stated in tender	Actual period of completion	Year of commissioning
1	2	3	4	5	6	7	8

Note:

1. Furnish performance reports, completion report or any other authentic supporting document.

2. Furnish for Solar Power Plants (which are offered under this), latest performance reports from State Electricity Boards / Clients certifying the successful operation for the period since commissioning. (To be furnished by the bidders.

PROFORMA K

AGREEMENT WITH THE SUCCESSFUL BIDDER

Format of the Agreement shall be issued to the successful bidder along with the work order.

PROFORMA – L

DECLARATION

(Please submit in office letterhead with technical bid with date)

I / We …….. ***(name of the bidder)*** hereby declare that I / We have not made any misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the pre-qualification document.

I / We hereby declare that we do not carry any records of poor performance such as abandoning work, not properly completing the contract, or financial failures/weaknesses, etc.

In case the above information is found false, I / We are fully aware that the tender / contract will be rejected / cancelled by the Institute and the EMD submitted by me /us will be forfeited.

In addition to the above, Institute shall not be responsible for paying the bills for any completed / partially completed work.

Seal and Signature of the Bidder