



भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान मोहाली
(मानव संसाधन विका मंत्रालय का एक स्वायत्त संस्थान, भारत सरकार के अधीन)
सैक्टर-81, नॉलेज सिटी, पो.ओ. मनौली, एस.ए.एस. नगर, मोहाली] पंजाब-140306



INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH MOHALI
(Estd. By Ministry of Human Resource Development, Govt. of India)
Sector – 81, Knowledge City, P.O. Manauli, S.A.S. Nagar, Mohali, Punjab -140306

Tender Documents



Name of Work: Conversion from battery based to direct grid power feeding in 5 x 20KWp SPV system at IISER Mohali.

Table of Contents:

Sr. No.	Particulars	Page No.
1.	Notice Inviting Tender	3
2.	Criteria of Eligibility	6
3.	Tender Acceptance Letter	12
4.	General Rules and Directions	13
5.	Instructions for Online Bid Submission	20
6.	Condition of Contract	24
7.	Performa of Schedule	27
8.	Clause of Contract	30



INDIAN INSTITUTE OF SCIENCE EDUCATION & RESEARCH

(Established by Ministry of Human Resource Development, Govt. of India)

IISER Mohali, Sector-81, Knowledge City, SAS Nagar-1403061

Tender Form Cost- Rs. 590/-

Tender Ref. No.: IISER/EE-EO/Estimate-P/19-20/08

Date: 22.05.2020

Notice Inviting Tender

1. The Executive Engineer on behalf of the Director, IISER Mohali, invites online bids under two bid system i.e. technical bid and financial bid through E- Central Public Procurement Portal i.e. <https://eprocure.gov.in/eprocure/app> from eligible contractor for the work mentioned below.

Name of work:- Conversion from battery based to direct grid power feeding in 5 x 20KWp SPV system at IISER Mohali.

Tender Ref No : IISER/EE-EO/Estimate-P/19-20/08
Estimated cost : INR 16,81,760/-
Earnest Money : INR 34,000.00/-
Stipulated period of work : 12 weeks

Critical Date Section

S. No	Particular	Date	Time
1.	Tender publishing date and time	22.05.2020	06:55 PM
2.	Tender documents download start date and time	22.05.2020	06:55 PM
3.	Bid submission start date and time	22.05.2020	06:55 PM
4.	Bid submission end date and time	01.06.2020	03:00 PM
5.	Technical bid opening date and time	02.06.2020	03:30 PM

1. Tender document may be downloaded from the website of E-Central Public Procurement portal (<https://eprocure.gov.in/eprocure/app>) and www.iisermohali.ac.in . Tender should be submitted online along with valid documents of eligibility criteria within the date mentioned above.
2. The Director, IISER Mohali shall be the “Accepting Authority” hereinafter referred to as such for the purpose of this contract.
3. For any information, other modifications and/or corrigendum may kindly visit IISER Mohali website <http://www.iisermohali.ac.in> and also publish on <https://eprocure.gov.in/eprocure/app>.

SUBMISSION OF TENDER:

Tender shall be submitted by the Bidders in two parts:

(i) Technical Bid. – Cover I (ii) Financial Bid. - Cover II

The two bid system will be followed for this tender. In this system the bidder must submit bid **on line at E-Procurement Portal(i.e. <https://eprocure.gov.in/eprocure/app>)** his offer in two covers. "**Cover No. 1- Technical Bid along with requisite fee details and all forms under seal and signature of Bidder**" mentioned below and "**Cover No.2 - Financial Bid**" respectively.

The **Cove I** (Technical Bid) shall consist of following:

- i) **Earnest Money** -The bidder shall furnish as part of its bid, an EMD of Rs. 34,000.00/- (Rupees thirty four thousand only). The EMD is to be submitted through Demand Draft of any Scheduled / Nationalized Bank (drawn in favour of “Registrar, IISER, Mohali”). MSME certificate to be relevant to the nature of work as called in tender.
- ii) **Cost of Tender Form** - The Cost of Tender Form Rs.590/- (non refundable) is to be submitted through Demand Draft of any Scheduled / Nationalized Bank (drawn in favour of “Registrar, IISER, Mohali”).

Note - The original payment instrument like Demand Draft of any Nationalized Bank against Earnest Money and Cost of Tender Form sent to the address- **IISER Mohall, Sector-81, knowledge City, PO- Manauli, SAS Nagar Mohali 140306, Punjab** by post/speed post/courier/by hand before bid opening date & time

iii) **Important Documents uploads in .pdf format only:-**

- a) Scanned copy of DD of EMD and Cost of Tender Form.
- b) Scanned copy of Enlistment.
- c) Scanned copy of OEM/ Authorized dealership certificate of preferred makes.
- d) Scanned copy of IT Return for the last three financial years.
- e) Scanned copy of work experience in Govt. Department
- f) Scanned copy of Tender Accept Letter

The Cover II (Financial Bid) shall consist of following:

- * Schedule of price bid of in the form of BoQ_XXXXX.xls (Will be formulated according to the type of work)

-sd-

Executive Engineer
Head IWD, IISER Mohali

NOTICE INVITING TENDER

1. Online item rate tenders are invited on behalf of the Director IISER Mohali from approved and eligible contractors of C.P.W.D. and those of appropriate list of Department Posts and Telecommunications, U.T. Administration, Chandigarh Housing Board, State PWD's, Autonomous body for the work of "Conversion from battery based to direct grid power feeding in 5 x 20KWp SPV system at IISER Mohali."

The enlistment of the contractors should be valid on the last date of tenders.

In case only the last date of sale of tender is extended, the enlistment of contractor should be valid on the original date of sale of tenders.

In case both the last date of receipt of application and sale of tenders are extended, the enlistment of contractor should be valid on either of the two dates i.e. original date of sale of tender or on the extended date of sale of tenders.

- 1.1 The work is estimated to cost Rs. 16,81,760/-. This estimate, however, is given merely as a rough guide

1.1.1. The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the tenders. He will also nominate Division which will deal with all matters relating to the invitation of tenders.

For composite tender, besides indicating the combined estimated cost put to tender, should clearly indicates the estimated cost of each component separately. The eligibility of tenderer will correspond to the combined estimated cost of different components put to tender.

1.2 CRITERIA OF ELIGIBILITY

1.2.1 Bidder shall submit the tender fee of Rs.590/- and EMD of Rs.34,000/- favoring Registrar, IISER Mohali and payable at Mohali.

NB- Original DD sends at Executive Engineer, IISER Mohali, Sector 81, Knowledge City, SAS Nagar, Mohali.

1.2.2

The tender shall be received by the undersigned by on 02.06.2020 up to 3:00 PM and envelope No. 1 only containing earnest money, conditions and tender documents shall be opened on the next working day. No consideration will be given to a tender received after the above stipulated time and date. Eligibility related documents shall be evaluated for criteria stipulated at 1.2.3 and agencies/contractors will accordingly be qualified/disqualified by the competent Authority. The financial bid (Envelope No 2) of qualified tenderer shall then be opened at notified time, date. The rates of each item must be quoted in figures

1.2.3 Contractors who fulfill the following criteria shall be considered by IISER Mohali for technical evaluation (if required) and opening of commercial bids:

- I) Contractors /firms should have successfully completed directly during last 7 years ending last day of the month previous to the one in which the bidding are invited, either three similar works costing not less than 40% i.e. Rs.6.73 lacs or two similar works costing not less than 60% i.e. Rs.10.09 lacs and one similar work costing not less than 80% i.e. Rs.13.45 lacs of the estimated cost of the work out of which at least one should have been executed in Govt departments.
- II) Average annual financial turn over during the last 3 (three) years ending 31st March of the previous year should at least be 50% of the estimated cost of work.
- III) Not incurred loss in more than two years during the last five years ending 31st March of the previous year.
- IV) Should have solvency of Rs 6.73 lacs.
- V) Functional & Technical specifications, model number of equipments unit and other instructions alongwith a copy of operation manual.
- VI) The agency will have to undertake all engineering, designing, site survey to be involved in the work and will be responsible for overall efficiency, working and power generation of the system.
- VII) The agency will have to submit monthly readings of all systems for a period of three months.
- VIII) Payment terms :
 - a) 40 % payment would be done after completion of 60% work.
 - b) 30 % payment would be done after completion of 95% work.
- IX) Balance 30% payment after 6 weeks of completion of work and subject to satisfactory power generation report.
- X) Warranty required : 1 year.
- XI) The agency, before quoting price, must visit the site and acquaint himself/herself of the condition of existing power plant.
- XII) The items for conversion in BOQ are tentative and the agency after award of work must design the system to ensure maximum power generation within the stipulated items mentioned in DNIT.

1.2.4 Eligibility criteria:

I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/we shall be debarred for tendering in the Institute in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

For the purpose of clause Similar work means “Providing and installation of solar PV power generation system ”.

2. Agreement shall be drawn with the successful tenderer on General Conditions of Contract for works which is available from the Engineer-in-Charge. Tenderer shall quote their rates as per various terms and conditions of the said form which will form part of the agreement.
3. The time allowed for carrying out the work will be 12 weeks from the date of start as defined in schedule ‘F’ or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.
4. The site for the work is available

OR

The site for the work shall be made available in parts as specified below:-

- a) Tender document consisting of plans, specifications, the schedule of quantities of the various classes of work to be done and the set of terms & conditions of contract to be downloaded from website .
5. i) Tenders shall be accompanied with tender cost of Rs.590/- in form of Demand Draft in favour of Registrar, IISER Mohali .

ii) Tenders shall be accompanied with Earnest money of Rs.34,000/- by way of Receipt Treasury Challan/Deposit at Call receipt of a scheduled bank/fixed deposit receipt of a scheduled bank/demand draft of a scheduled bank issued in favour of the Registrar, IISER Mohali, Payable at Chandigarh. 50% of earnest money or Rs.20 lakh, whichever is less, will have to be deposited in the shape prescribed above and balance amount of earnest money can be accepted in the form of Bank guarantee issued by a scheduled bank having validity for 6 months or more from the last date of receipt of tenders
6. The contractor whose tender is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the tendered amount within the period specified in Schedule F. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs.10000/-) or Deposit at Call receipt of any scheduled bank/Banker’s cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any scheduled bank (in case guarantee amount is less than Rs.1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule ‘F’. including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.

Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Institute and local conditions and other factors having a bearing on the execution of the work.

7. The competent authority does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without the assignment of any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.
8. Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
9. The competent authority reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.
10. The contractor shall not be permitted to tender for works in the Institute's Engineering Department (responsible for award and execution of contracts) in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Executive Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relative to any Group A & B officer in the Institute's Engineering Department. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Institute/debarring for further tendering in the Institute for at least 5 years.
11. No Engineer or other officers employed in Engineering or Administrative duties in Engineering Department of the Institute is allowed to work as a contractor for a period of one year after his retirement from Institute's service without the previous permission of the competent authority in writing. This contract is liable to be canceled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of the competent authority as aforesaid before submission of the tender or engagement in the contractor's service.

12. The tender for the works shall remain open for acceptance for a period of One hundred twenty (120) days from the date of opening of tenders/ One hundred twenty days from the date of opening of financial bid in case tenders are invited on 2/3 envelop system (strike out as the case may be) if any tenderer withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the Institute shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the tenderer shall not be allowed to participate in the re-tendering process of the work.

13. This Notice inviting tender shall form a part of the contract document. The successful tenderer/ contractor, on an acceptance of his tender by the Accepting Authority, shall within 15 days from the stipulated date of start of the work sign the contract consisting of:

a) The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.

b) Standard Form 7/8.

For Composite Tenders

16.1.1 The Engineer Incharge of the major component will call tenders for the composite work. The cost of tender document and Earnest Money will be fixed with respect to the combined estimated cost put to tender for the composite tender.

16.1.2 The tender document will include following three components:

Part A:- Form-6, Form-7/8 including schedule A to F for major component of the work, Standard General Conditions of Contract or latest edition as applicable with all amendments/modifications.

Part B:- General/specific conditions, specifications and schedule of quantities applicable to major component of the work.

Part C: Schedule A to F for minor component of the work. (Engineer in charge of major component shall also be competent authority under clause 2 and clause 5 as mentioned in schedule A to F for major components) General/specific conditions, specifications and schedule of quantities applicable to minor component(s) of the work.

16.1.3 The tenderer must associate with himself, agencies of the appropriate class eligible to tender for each of the minor component individually.

The eligible tenderers shall quote rates in terms of overall percentage above or below the total estimated amount put to tender must be filled both in figures and words on the last page of schedule of quantities. It will be obligatory on the part of the tenderer to sign the tender document for all the components (The schedule of quantities, conditions and special conditions etc.)

16.1.5 After acceptance of the tender by competent authority, the Engineer in charge of major component of the work shall issue letter of award on behalf of the Director. After the work is awarded, the main contractor will have to enter into one agreement with Engineer in charge of major component and has also to sign two or more copies of agreement depending upon number of Engineer Incharge of minor components. One such signed set of agreement shall be handed over to Engineer in charge of minor component. Engineer Incharge of major component will operate part A and part B of the agreement. Engineer in charge of minor component(s) shall operate Part C along with Part A of the agreement.

16.1.6 Entire work under the scope of composite tender including major and all minor components shall be executed under one agreement.

16.1.7 Security Deposit will be worked out separately for each component corresponding to the estimated cost of the respective component of works. The Earnest Money will become part of the security deposit of the major components of work.

16.1.8 The main contractor has to associate agency(s) for minor component(s) conforming to eligibility criteria as defined in the tender document and has to submit detail of such agency(s) to Engineer-in-charge of minor component(s) within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer-in-charge of minor component(s).

16.1.9 In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in-charge of minor component. The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case Engineer-in-charge is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.

16.1.10 The main contractor has to enter into agreement with the contractor(s) associated by him for execution of minor component(s). Copy of such agreement shall be submitted to Hospital Engineer in charge of each minor component as well as to Engineer in charge of major component. In case of change of associate contractor, the main contractor has to enter into agreement with the new contractor associated by him.

16.1.11 Running payment for the major component shall be made by Engineer-in-Charge of major discipline to the main contractor. Running payment for minor components shall be made by the Engineer-in-Charge of the discipline of minor component directly to the main contractor.

16.1.12 Final bill of whole work shall be finalized and paid by the Engineer-in-Charge of major component. Engineer(s) in charge of minor component(s) will prepare and pass the final bill for their component of work and pass on the same to the Engineer-in-Charge of major component for including in the final bill for composite contract.

16.1.13 It will be obligatory on the part of the tenderer to sign the tender document for all the components before the first payment is released.

No price preference to any corporate society/Registered society, Govt. Public Sector undertakings / bodies shall be given and tenders shall be exclusively dealt with on merit.

The contractor shall comply with the provisions of the Apprentices Act 1961, minimum wages Act 1948, Workmen's compensation Act 1923, contract labour (Regulation and Abolition Act 1970), payment of wages Act 1938, Employer's liability Act 1938, Maternity Benefits Act 1961, and the Industrial disputes Act 1947 as applicable and the rules and regulations issued there under and by the local Administration / Authorities from time to time as well all provisions of law applicable to workmen. Failure to do so shall amount to breach of the contract and the Engineer-in-Charge may at his discretion terminate the contract. The Contractor shall also be liable for any pecuniary liability arising on account of violation by him of any of the said Acts and shall indemnify the Institute on that account. Institute will not be liable for any act or omission on the part of the contractor in so far as any violation of any of the aforementioned acts.

The contractor shall enter into integrity agreement (as per CPWD format) to be signed by the bidder and same signatory authorized to sign on behalf of Institute

Each tenderer shall submit only one tender; either by him or as partners in a joint venture. A tenderer who submits or participates in more than one tender will be disqualified.

Unless otherwise stated, the contract shall be for the whole work as described in the "Schedule of items of Works" and the drawings. The contractor shall be bound to complete the whole work as described in the schedule of items of works and the drawings, including additional items, if any, as per drawings and instructions. The issuance of certificate of completion as issued by the Engineer-in-Charge shall be mandatory and will be conclusive proof of completion of work.

The contractor shall get the appended structural drawing proof checked from structural Engineer before commissioning the work and hand over the design details to the Engineer-in-charge.

Interpretations, corrections and changes to the Tenders Documents shall be made by Addendum, if required at E-Procurement portal on <https://eprocure.gov.in/eprocure/app>

Each Tenderer shall ascertain prior to submitting his Tender that he has received all Addenda issued and he shall so acknowledge their receipt in his Tender.

Bidder shall submit the documents in .pdf format:

- i) Demand draft/Deposit at call receipt from a Scheduled Bank towards earnest money.
- ii) Partnership deed or Registration Certificate of the Firm or Company as the case may be.
- iii) Power of Attorney

The provisions in the Tender documents shall govern over the contents of the above paragraphs if in contradiction or variation.

The contractor shall comply with the provisions of prevalent ESI Act.

General Rules and Directions

General Rules & Directions

General Rules & Directions

1. All works proposed for execution of contract will be notified in a form of invitation to tender pasted in public places and signed by the officer inviting tender or by publication in Newspapers as the case may be.

This form will state the work to be carried out, as well as the date for submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tenderer, and the amount of the security deposit and performance guarantee to be deposited by the successful tenderer and the percentage, if any, to be deducted from bills: Copies of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of identification by the officer inviting tender shall also be opened for inspection by the contractor at the office of officer inviting tender during office hours.

2. In the event of the tender being submitted by a firm, it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power-of attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act, 1952.

3. Receipts for payment on account of work, when executed by a firm, must also be signed by all the partners, except where contractors are described in their tender as a firm, in which case the receipts must be signed in the name of the firm by one of the partners, or by some other person having due authority to give effectual receipts for the firm.

**Application
for item
Rate Tender
only
(Form- 8)**

4. Any person who submits a tender shall fill up the usual printed form, stating at what rate he is willing to undertake each item of the work. Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort including conditional rebates will be summarily rejected. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name and number of the works to which they refer, written on the envelopes.

The rate(s) must be quoted in decimal coinage. Amounts must be quoted in full rupees by ignoring fifty paise and considering more than fifty paise as rupee one.

**Applicable for
Percentage Rate
Tender only
(Form- 7)**

4 A. In case of Percentage Rate Tenders, tenderer shall fill up the usual printed form, stating at what percentage below/above (in figures as well as in words) the total estimated cost given in Schedule of Quantities at Schedule –A, he will be willing to execute the work. The tenders submitted shall be treated as invalid if:

- (i) The contractor does not quote percentage above/below on the total amount of tender or any section/sub head of the tender.
- (ii) The percentage above/below is not quoted in figures & words both on the total amount of tender or any section/sub head of the tender.
- (iii) The percentage quoted above/below is different in figures & words on the total amount of tender or any section/sub head of the tender:-

Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort including conditional rebates, will be summarily rejected. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name and number of the works to which they refer, written on the envelopes.

4B. In case the lowest tendered amount (estimated cost + amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit sealed revised offer in the form of letter mentioning percentage above/below on estimated cost of tender including all sub sections/sub heads as the case may be, but the revised percentage quoted above/below on tendered cost or on each sub section/sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers.

In case any of such contractor refuses to submit revised offer, then it shall be treated as withdrawal of his tender before acceptance and 50% of earnest money shall be forfeited.

If the revised tendered amount of two or more contractors received in revised offer is again found to be equal, the lowest tender, among such contractors, shall be decided by draw of lots in the presence of Engineer-in-charge of major & minor component(s) (also Director, IISER in case Horticulture work is also included in the tender).

In case all the lowest contractors those have quoted same tendered amount, refuse to submit revised offers, then tenders are to be recalled after forfeiting 50% of EMD of each contractor.

Contractor(s), whose earnest money is forfeited because of non-submission of revised offer, shall not be allowed to participate in the re-tendering process of the work.

5. The officer inviting tender or his duly authorized assistant will open tenders in the presence of any intending contractors who may be present at the time, and will enter the amounts of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt for the earnest money shall thereupon be given to the contractor who shall thereupon for the purpose of identification sign copies of the specifications and other documents mentioned in Rule-I. In the event of a tender being rejected, the earnest money shall thereupon be returned to the contractor remitting the same, without any interest.

6. The officer inviting tenders shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender.

7. The receipt of an accountant or clerk for any money paid by the contractor will not be considered as any acknowledgment or payment to the officer inviting tender and the contractors shall be responsible for seeing that he procures a receipt signed by the officer inviting tender or a duly authorized Cashier.

8. The memorandum of work tendered for and the schedule of materials to be supplied by the department and their issue-rates, shall be filled and completed in the office of the officer inviting tender before the tender form is issued. If a form is issued to an intending tenderer without having been so filled in and incomplete, he shall request the officer to have this done before he completes and delivers his tender.

9. The tenderer shall sign a declaration under the official Secret Act 1923, for maintaining secrecy of the tender documents drawings or other records connected with the work given to them. The unsuccessful tenderer shall return all the drawings given to them.

9A. Use of correcting fluid, anywhere in tender document is not permitted. Such tender is liable for rejection.

**Applicable for
Item Rate
Tender only
(Form- 8)**

10 In the case of Item Rate Tenders, only rates quoted shall be considered. Any tender containing percentage below/above the rates quoted is liable to be rejected. Rates quoted by the contractor in item rates tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, if a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall unless otherwise proved be taken as correct. If the amount of an item is not worked out by the contractor or it does not correspond with the rates written either in figures or in words then the rates quoted by the contractor in words shall be taken as correct. Where the rates quoted by the contractor in figures and in words tally but the amount is not worked out correctly, the rates quoted by the contractor will unless otherwise proved be taken as correct and not the amount. In even no rate has been quoted for any item(s), leaving space both in figure(s), word(s) and amount blank, it will be presumed that the contractor has included the cost of this/these item(s) in other items and rate for such item(s) will be considered as zero and work will be required to be executed accordingly.

**Applicable for
Percentage Rate
Tender only
(Form- 7)**

10A. In case of Percentage Rate Tenders only percentage quoted shall be considered. Any tender containing item rates is liable to be rejected. Percentage quoted by the contractor in percentage rate tender shall be accurately filled in figures and words, so that there is no discrepancy.

11. In the case of any tender where unit rate of any item/items appear unrealistic, such tenders will be considered as unbalanced and in case the tenderer is unable to provide satisfactory explanation such a tender is liable to be disqualified and rejected.

**Applicable for
Item Rate
Tender only
(Form- 8)**

12. All rates shall be quoted on the tender form. The amount for each item should be worked out and requisite totals given. Special care should be taken to write the rates in figures as well as in words and the amount in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word 'Rs.' should be written before the figure of rupees and word 'P' after the decimal figures, e.g. 'Rs. 2.15 P' and in case of words, the word, 'Rupees' should precede and the word 'Paise' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only' should invariably be upto two decimal places. While quoting the rate in Schedule of quantities, the word only should be written closely following the amount and it should not be written in the next line.

**Applicable for
Percentage Rate
Tender only
(Form- 7)**

12A. In Percentage Rate Tender, the tenderer shall quote percentage below/above (in figures as well as in words) at which he will be willing to execute the work. He shall also work out the total amount of his offer and the same should be written in figures as well as in words in such a way that no interpolation is possible. In case of figures, the words 'Rs' should be written before the figures of rupees and word P after the decimal

figures, e.g. 'Rs. 2.15P and in case of words, the word 'Rupees' should precede and the word 'Paise' should be written at the end.

13.(i) The Contractor whose tender is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the tendered amount within the period specified in Schedule F. This guarantee shall be in the form of Deposit at call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form.

(ii) The contractor whose tender is accepted will also be required to furnish by way of Security Deposit for the fulfillment of his contract, an amount equal to 5% of the tendered value of the work. The Security deposit will be collected by deductions from the running bills of the contractor at the rates mentioned above and the earnest money deposited at the time of tenders, will be treated as a part of the Security Deposit. The Security amount will also be accepted in the shape of Government Securities. Fixed Deposit Receipt of a Scheduled Bank or State Bank of India will also be accepted for this purpose provided confirmatory advice is enclosed.

14. On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from Engineer-in-Charge shall be communicated in writing to the Engineer-in-Charge.

15. Turnover tax, GST or any other tax on material in respect of this contract shall be payable by the Contractor and the Institute will not entertain any claim whatsoever in respect of the same.

16. The contractor shall give a list of employees in IISER related to him.

17. The tender for the work shall not be witnessed by a contractor or contractors who himself/themselves has/have tendered or who may and has/have tendered for the same work. Failure to observe this condition would render, tenders of the contractors tendering, as well as witnessing the tender, liable to summary rejection.

18. The tender for composite work includes in addition to building work all other works such as sanitary and water supply installations drainage installation, electrical work, horticulture work, roads and path etc. The tenderer apart from being a registered contractor (B & R) of appropriate class, must associate himself with agencies of appropriate class which are eligible to tender for sanitary and water supply drainage, electrical and horticulture work in a composite tender subject to the approval of the institute.

19. The contractor shall submit list of works which are in hand (Progress) in the following form:-

Name of work	Name and particulars of divn. Where work is being executed	Value of work	Position of works in progress	Remarks
1	2	3	4	5

20. The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the Engineer Incharge may in his discretion without prejudice to any other right or remedy available in law cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

21. Every tender shall be written in the English language. All other information such as documents and drawings supplied by the tenderer will also be in the English language only. Drawings and designs shall be dimensioned according to the metric system of measurements. Tenders shall be forwarded under cover or a letter typewritten on the tenderer's letterhead and duly signed by the tenderer. Signature must be in long hand executed in ink by a duly authorized principal of the tendering firm. No oral, telegraphic or telephonic tenders or subsequent modifications there to shall be entertained.

22. The tenderer shall sign of every page of the tender documents in taken of acceptance of tender conditions and for the purpose of identification. Tenders containing erasures and alterations of the tender documents are liable to the rejected unless these are authenticated by the person signing the Tender Documents.

23. The tenderer shall not be entitled to claim any costs, charges, expenses in connection with preparation and submission and subsequent clarification of his tender in the event of withdrawal of the invitation of tenders by the Institute.

24. The institute reserves the right to revise or amend the tender documents prior to the date notified for opening of the tenders and also the right to postpone the date of presentation and opening of tenders without assigning any reason, whatsoever.

25. The Director IISER, Mohali shall be referred as "Institute" in all the documents of Notice Inviting Tender/Contract Agreement.

26. Wherever the word 'Engineer-in -Charge occurs it shall mean Executive Engineer of IISER Mohali.

Condition of contract

1. The Contract means the documents forming the tender and acceptance thereof and the formal agreement executed between competent authority on behalf of the Director, IISER and the contractor, together with the document referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by Engineer-in-charge and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.
2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:-

I) The expression works or work shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.

ii) The site shall mean the land/ or other places on into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.

iii) The contractor shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such, individual, firm or company.

iv) The Institute means the Director, IISER and his successors.

v) The Engineer-in-charge means the Executive Engineer who shall supervise and be in-charge of the work and who shall sign the contract on behalf of the Director, IISER Mohali mentioned in schedule 'F' hereunder.

vi) Institute shall mean the Director IISER, Mohali.

vii) Administration shall mean the administration of the IISER Mohali.

viii) Local authority shall mean the municipal corporation of Mohali and shall also deemed to include any other body or department of the administration.

ix) Accepting Authority shall mean the authority mentioned in Schedule 'F'

x) Excepted Risk are risks due to riots (Other than those on account of contractor's employees) war (Whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any acts of Institute damages from aircraft, act of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by the Institute of part of the works in respect of which a certificate of completion has been issued or a cause solely due to the Institute's faulty design of works.

xi) Market Rate shall be the rate as decided by the Engineer-in-Charge on the basis of the cost of materials and labour at the site where the work is to be executed plus the percentage mentioned in Schedule 'F' to cover, all overheads and profits.

xii) Schedule(s) referred to in these conditions shall mean the relevant schedule (s) annexed to the tender papers or the standard Schedule of Rates of the Institute mentioned in Schedule 'F' hereunder, with the amendments thereto issued upto the date of receipt of the tender.

xiii) Department means Director, IISER or any Division of IISER which invites tenders on behalf of Institute as specified in the Schedule 'F'.

xiv) Tendered value means the value of the entire work as stipulated in the letter of award.

xv) Date of commencement of work: The date of commencement of work shall be the date of start as specified in schedule 'F' or the first date of handing over of the site, whichever is later, in accordance with the phasing if any, as indicated in the tender documents.

Scope

3. Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.

4. Headings and Marginal notes to these General Conditions of Contract shall not be deemed to form part thereof or be taken into considerations in the interpretation or construction thereof or of the contract.

5. The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specifications, schedule of Rates and such other printed and published documents, together with all drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of this contract.

Works to be Carried out:

6. The work to be carried out under the Contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, equipment and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The descriptions given in the Schedule of Quantities (Schedule-A) shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting setting, fitting and fixing in position and all other labors necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

Sufficiency of Tender

7. The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall except as otherwise provided, cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the works.

8.2 If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intentions of the document and his decision shall be final and binding on the contractor.

8.3 Any error in description, quantity or rate in schedule of Quantities or any omission there from shall not vitiate the contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract.

Signing of Contract

9. The successful tenderer/ contractor on acceptance of his tender by the Accepting authority, shall within 15 days from the stipulated date of start of the work sign the contract consisting of:-

i) The notice inviting tender, all the documents including drawings, if any forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.

ii) Standard form as mentioned in Schedule 'F' consisting of:

a) Various standard clauses with corrections upto the date stipulated in Schedule 'F' along with annexure thereto.

b) Safety Code.

c) Model Rules for the protection of health, sanitary arrangements for workers employed by the contractor.

d) Contractor's Labour Regulations.

e) List of Acts and omissions for which fines can be imposed.

iii) No payment for the work done will be made unless contract is signed by the contractor.

SCHEDULE 'D'

Extra schedule for specific requirements/ documents for the work if any.

SCHEDULE 'E'

Reference to General Conditions of contract.

Name of Work : "Conversion from battery based to direct grid power feeding in 5 x 20KWp SPV system at IISER Mohali."

Estimated cost of work : Rs. 16,81,760.00/-

Earnest Money : Rs.34,000/-

(ii) Performance Guarantee : 5% of tendered value

(iii) Security Deposit : 5% of tendered value

SCHEDULE 'F'

REFERENCE TO GENERAL CONDITION OF CONTRACT

GENERAL RULES & DIRECRTIONS

Officer inviting tender

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3:

See below

Definations:

2 (v)	Engineer- in- charge	Executive Engineer, IISER, Mohali.
2 (viii)	Accepting Authority	Director, IISER .
2 (x)	Percentage on cost of material and labour to cover all overheads and profits	15%
2 (xi)	Standard Schedule of Rates	DSR and market rates.
2 (xii)	Department	IISER Mohali
9 (ii)	Standard contract Form	General Conditions of Contract

Clauses of Contract

- Clause 1
- (i) Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance 15 days
- (ii) Maximum allowable extension beyond the period provided in (i) above
- Clause 2
- Authority for fixing compensation under clause-2 Director IISER, Mohali.
- Clause 2A
- Whether Clause 2A shall be applicable Yes / No
- Clause 5
- Number of days from the date of issue of letter of acceptance for reckoning date of start 7 days

Mile stone(S) as per table given below:-

S. No	Description of Milestone (Physical)	Time allowed in days (from date of start)	Amount to be withheld in case of non-achievement of milestone

Time allowed for execution of work, 12 weeks

Authority to decide:

- (i) Extension of time Director IISER
- (ii) Rescheduling of mile Director IISER Mohali

Clause 6, Clause applicable - (6 or 6A)

6A

Clause 7 Gross work to be done together with Rs.

net payment /adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment

Clause 10A

List of testing equipment to be provided by the contractor at site lab

1	2	3
4	5	6

Clause 10C

Component of labour expressed as %
percent of value of work =

Clause 10CA

S.No	Material covered under this clause	Nearest Materials (other than cement, reinforcement bars and the structural steel) for which All India Wholesale Price Index to be followed	Base Price of all Materials covered under clause 10 CA*

* Base price of all the materials covered under clause 10 CA is to be mentioned at the time of approval of NIT.

Clause
10CC

Clause 10 CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column	Not applicable
Schedule of component of other Materials,	Not applicable
Component of civil (except materials covered under clause 10CA) /Electrical construction Materials expressed as percent of total value of work. -	Not applicable
Component of Labour - expressed as percent of total value of work.	Not applicable
Component of P.O.L. - expressed as percent of total value of work.	Not applicable

Clause 11	Specifications be followed for execution of work.	<ul style="list-style-type: none"> i) NIT Specifications. ii) CPWD specifications with upto date amendments iii) Bureau of Indian Standards wherever no such specifications exists in S.No. i) & ii)
-----------	---	---

- Clauses 12
12.2 & 12.3 Deviation limit beyond which clause 12.2 & 12.3 shall apply for building work 30%
- 12.5 Deviation limit beyond which clause 12.2 & 12.3 shall apply for foundation work 30%
- Clause 16
Competent authority for deciding reduced rates Director, IISER, Mohali.
- Clause 18
List of mandatory machinery, tools & plants to be deployed by the contractor at site:-
- 1 2..... 3.....
- 4 5..... 6.....
- 7 8..... 9.....
- Clause 36 (i)

Requirement of Technical Representative(s) and recovery Rate

S N	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical/ Technical Representative)	Minimum Expenditure	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i)	
						Figures	Words

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers

Clause 42

- (i) Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates 2018 printed by C.P.W.D.
- (ii) Variations permissible on theoretical quantities:
 (a) Cement
 For works with estimated cost put to tender not more than Rs. 5 lakh. NA
 For works with estimated cost put to tender more than Rs.5 lakh. NA
- (iii) Bitumen for all works NA
- (iv) Steel reinforcement and structural steel sections for each diameter, section and category NA
- (v) All other materials NIL

Recovery rates for quantities beyond permissible variation

Sr. No.	Description of Item	Rates in figures and words at which recovery shall be made from the contractor	
		Excess beyond permissible variation	Less use beyond the permissible variation.
1.	Cement		
2.	Steel reinforcement		
3.	Structural sections		
4.	Bitumen issued free		
5.	Bitumen issued at stipulated fixed price.		

TENDER ACCEPTANCE LETTER

(To be given on Company Letter Head)

Date:

To,

Executive Engineer

IISER Mohali

Sub: Acceptance of Terms and Conditions of Tender. Tender

Reference No.: IISER/EE-EO/Estimate-P/19-08

Name of Tender/Work :- Conventional to direct grid power feeding in SPV system at IISER Mohali.

Dear Sir

1. I/We have downloaded/obtain the tender documents(s) from the above mentioned Tender/Work from the website(s) namely: as per your advertisement, given in the above mentioned website(s).
2. I/We hereby certify that I/We had read the entire terms and conditions of the tender documents (including all documents like annexure(s), schedule(s), etc.) which form part of the contract agreement and I/We shall abide hereby by the terms/conditions/clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/organization too have also been taken into consideration, while submitting the acceptance letter.
4. I/ We hereby unconditionally accept the tender conditions of above mentioned tender document(s) in its totality/entirety.
5. In case any provision of this tender are found violated, then your department/organization shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the bidder, with official seal)

Instructions for Online Bid Submission:

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

More information useful for submitting online bids on the CPP Portal may be obtained at:
<https://eprocure.gov.in/eprocure/app>.

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement (<https://eprocure.gov.in/eprocure/app>) by clicking on the link "Online bidder :Enrollment" on the CPP Portal which is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username as assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with Signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC /e-Token.

SEARCH FOR TENDER DOCUMENTS

- 1) There are various search option built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- 1) Once the bidders having selected the tenders they are interested in, they may download the required documents / tender schedules. The tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- 2) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification I help from the Helpdesk.

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may be to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF / JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

1. Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
3. Bidder has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument,
4. Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DO/any other accepted instrument, physically sent should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
5. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white 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.
6. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
7. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

8. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
9. Upon the successful and timely submission of bids (i.e after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
10. The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

Tenderer's to study entire tender document carefully

- a) Submission of a tender by a tenderer implies that he has read all the stipulations contained in this tender document and all other contract documents and has acquainted himself of the nature, site conditions scope and specifications of the works to be executed and of conditions and rates at which stores will be issued to him by the IISER. The contractor shall also be deemed to have acquainted himself will local conditions and other factors which have a bearing on the execution of the works.
- b) Before submitting the tender for the work to IISER, the tenderer should thoroughly examine the existing conditions of site
- c)After award of the work contractor has to prepare and submit the shop drawings (only for air-conditioning / fabrication work) for approval of the Engineer-in-charge.
- d)No claim will be entertained on account of ignorance of site conditions.

TECHNICAL SPECIFICATIONS FOR SOLAR PHOTO VOLTAIC POWER PLANT SYSTEM

GRID TIE INVERTER OR PCU

1. Grid Tie Inverter or Power Conditioning Unit (PCU) should convert DC power produced by SPV modules in to AC power.

Sl. No.	Parameters	Specifications
A Input DC		
i	Maximum Input PV Power	As per design
ii	Maximum Input Voltage	1000 V
iii	DC Input Voltage Range	350-800 V
iv	Number of Independent MPPT	2 or More
v	MPPT Voltage range (Minimum range)	As per design
vi	Maximum DC Current	Design to be submitted

B Output AC		
i	Rated & Maximum AC Power Output	As per design
ii	Output AC Voltage	400 V AC, three phase, 4 wire, 50Hz +/- 2.5 Hz
iii	Frequency	50 Hz
iv	Total harmonic distortion	< 3%
v	Night Time Loss	<3 W
vi	Power Factor	1 (Adjustable +/-0.8)

C Performance		
i	Maximum Efficiency	Not less than 97%
ii	Self Consumption At Night	<1 W
iii	MPPT Efficiency	>99%

D Protection		
i	DC Reverse Polarity Protection	Yes
ii	DC Switch	Yes
iii	Protection Class / Over Voltage Category	I / III

E Certification

F Communication

i	Power Management Unit	According to certification
ii	Standard Communication Port	RS485
iii	Operation Data Storage	25 Years

G General Data

i	Ambient Temperature Range	-25o C To +60o C
ii	Degree of Protection	IP65
iii	Humidity	0 - 100% (Non Condensing)
iv	Dimension / Weight	As per Manufacturer design.
v	Noise level	< 65 dBA
vi	Cooling	Natural
vii	Surge Rating	Up to 150% of the continuous rating for a minimum of 30 Seconds
viii	Display	LCD
ix	Warranty	5 Years

2. Other important Features/Protections required in the Grid Tie Inverter or Power Conditioning Unit (PCU)

2.1 Automatic morning wake-up and nightly shutdown

2.2 Grid Tie Inverter or Power Conditioning Unit (PCU) must have the feature to work in tandem with other similar Grid Tie Inverter or Power Conditioning Unit (PCU) and be able to be successively switched ON and OFF automatically based on solar radiation variations during the day.

2.3 Authentic tracking of the solar arrays maximum power operation voltage (MPPT).

2.4 Array ground fault detection.

2.5 LCD and piezoelectric keypad operator interface Menu driven Automatic fault conditions reset for all parameters like voltage, frequency and/or black out.

2.6 MOV type / Category II surge arresters/ on AC and DC terminals for over voltage protection from lightning induced surges or else suitable arrangement shall be provided externally.

2.7 The Grid Tie Inverter or Power Conditioning Unit (PCU) shall have AC /DC side dis-connector of appropriate rating or else suitable arrangement shall be provided externally. DC disconnector can be provided in String Combiner box alternatively.

2.8 All parameters should be accessible through an industry standard communication link.

3. Electrical safety, Earthing and protection

3.1 Internal Faults: In built protection for internal faults including excess temperature, commutation failure, overload and cooling fan failure (if fitted) is required.

3.2 Over Voltage Protection: Over Voltage Protection against atmospheric lightning discharge to the PV array is required.

3.3 Earth fault supervision: An integrated earth fault device shall have to be provided to detect eventual earth fault on DC side and shall send message to the supervisory system.

3.4 The Grid Tie Inverter or Power Conditioning Unit (PCU) shall include an easily accessible emergency OFF button located at an appropriate position on the unit

3.5 The Grid Tie Inverter or Power Conditioning Unit (PCU) shall include ground lugs for equipment and PV array grounding. The DC circuit ground shall be a solid single point ground connection in accordance with IEC 69042.

4. General Features of Grid Tie Inverter or Power Conditioning Unit (PCU):

The Grid Tie Inverter or Power Conditioning Unit (PCU) enclosure shall be weatherproof and capable of surviving climatic changes and should keep the Grid Tie Inverter or Power Conditioning Unit (PCU) intact under all conditions in the room where it will be housed. The Grid Tie Inverter or Power Conditioning Unit (PCU) shall be located outdoor with suitable protection and should be either wall/ pad mounted. Moisture condensation and entry of rodents and insects shall be prevented in the Grid Tie Inverter or Power Conditioning Unit (PCU) enclosure.

5. Operating Modes:

The following operating modes are to be made available: Night or Sleep mode: Where the Grid Tie Inverter or Power Conditioning Unit (PCU) is almost completely turned off, with just the timer and control system still in operation, losses should not exceed 1 watts per 5 kilowatt.

a. Standby mode : Where the control system continuously monitors the output of the solar generator until preset value is exceeded (typically 10 watts)

b. Operational or MPPT tracking mode : The control system continuously adjust the voltage of the generator to optimize the power available. The power conditioner must automatically re-enter stand-by mode when input power reduces below the standby mode threshold. Front Panel display should prove the status of the Grid Tie Inverter or Power Conditioning Unit (PCU), including AC Voltage, Current, Power output & DC Current, Voltage and Power input, and fault Indication (if any).