


SECTION-I	PRESS NOTICE	
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**POSTGRADUATE INSTITUTE OF MEDICAL EDUCATION AND RESEARCH, CHANDIGARH
DEPARTMENT OF HOSPITAL ENGINEERING & PLANNING
ELECTRICAL DIVISION**

NOTICE INVITING e-TENDER

The Hospital Engineer (Electrical), PGIMER Chandigarh invites on behalf of the Director PGIMER Chandigarh **Online Percentage rate bids** from the specialized agencies dealing in similar type of workson two bid system (Eligibility cum technical & Financial Bid) for the following work :-

1.	NIT No.	PGI/Engg./Elect./2026-27/07
2.	Name of work	Up-gradation/New hybrid (Passive + Active) Power Factor correction for 10 nos. 11kV Substations, PGIMER, Chandigarh
3.	Estimated cost	Rs. 441.00 Lakh
4.	Earnest Money	Rs. 8,82,000/-
5.	Period of Completion	6 Months
6.	Date & Time for Pre Bid Meeing	28.05.2026 at 11:00 AM
7.	Last date & time for submission of bid	08.06.2026 at 11:00 AM
8.	Last date & time for submission of Original EMD or EMD exemption certificate for MSE/MSME	09.06.2026 at 10:30 AM
9.	Date & time for opening of Eligibility cum Technical bid.	09.06.2026 at 11:00 AM
10.	Date & time for opening of Financial bid	To Be Declare later

The Original EMD or EMD exemption certificate for MSE/MSME as scanned & uploaded shall be deposited physically by all the intending bidders in the office of H.E. (Electrical) as per above schedule failing which the bid shall be treated as invalid.


The MSME firms registered in NSIC under PP policy are exempted from payment of EMD for goods and services only.

The tender forms and other details can be obtained from the website: <https://eprocure.gov.in/eprocure/app> and official website of the PGIMER [www. pgimer.edu.in](http://www.pgimer.edu.in). Contractors are requested to get their firm registered on the website <https://eprocure.gov.in/eprocure/app> for participating in e-tendering process (Helpdesk no. 0172-2755806, 2755843, email id:- electricaldivisionpgi@gmail.com).

SECTION-II	CHECK LIST	
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CHECK LIST FOR CONTRACTORS FOR SUBMISSION OF TENDERS ONLINE:

1. THE FIRM MUST UPLOAD THE NECESSARY DOCUMENTS AS MENTIONED IN LIST OF DOCUMENTS TO BE SCANNED AND UPLOADED WITHIN THE PERIOD OF BID SUBMISSION AT PAGE 10 OF BID DOCUMENTS.
2. IF ANY DISCREPANCY IS NOTICED BETWEEN UPLOADED EMD AT THE TIME OF SUBMISSION OF BID AND ORIGINAL EMD SUBMITTED PHYSICALLY BY THE BIDDERS IN THE OFFICE OF THE BID OPENING AUTHORITY, THE BID SUBMITTED SHALL BECOME INVALID.
3. TENDER TO BE WITNESSED AT SPECIFIED PAGE OF TENDERED DOCUMENTS AT THE TIME OF DRAWING AGREEMENT WITH THE SUCCESSFUL BIDDER.
4. THE TENDER / TENDERS CONTAINING CONDITIONS CONTRARY TO THOSE SPECIFIED IN THIS DOCUMENT SHALL BE SUMMARILY REJECTED.
5. THE INTENDING BIDDER SHALL QUOTE HIS PERCENTAGE RATE IN FIGURE ONLY. THE RATES IN WORDS, AMOUNT AND THE TOTAL IS GENERATED AUTOMATICALLY. THEREFORE, THE RATE QUOTED BY THE BIDDER IN FIGURES IS TO BE TAKEN AS CORRECT.
6. THE CONTRACTOR(S) SHALL QUOTE THE PERCENTAGE RATES KEEPING IN MIND, CPWD GENERAL CONDITIONS OF CONTRACT 2023 FOR CONSTRUCTION WORKS, SPECIAL CONDITIONS OF CONTRACT ETC.
7. IT MAY BE NOTED THAT IN THE PRESENT CONTRACT CLAUSE 10B (ii), 10C, 10CA & 10CC ARE NOT APPLICABLE.
8. ONCE THE BID UPLOADED BY THE BIDDER IS WITHDRAWN, HE WILL NOT BE ALLOWED TO RESUBMIT HIS BID, HOWEVER, HE CAN EDIT HIS BID ANY NUMBER OF TIMES BUT BEFORE LAST DATE & TIME OF SUBMISSION OF BID.

<u>SECTION-III</u>	<u>Form- 6 FOR</u> <u>e TENDERING</u>	
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1. Percentage rate bids are invited on behalf of the Director, PGIMER, Chandigarh from the specialized agencies dealing in similar type of works for the work of **“Up-gradation/New hybrid (Passive + Active) Power Factor correction for 10 nos. 11kV Substations, PGIMER, Chandigarh”**
 - 1.1 The work is estimated to cost **Rs. 441.00 Lakh**. This estimate, however, is given merely as a rough guide.
 - 1.2 Contractors who fulfill the following requirements shall be eligible to apply. Joint ventures are not accepted
 - 1.2.1 Intending bidder is eligible to submit the bid provided he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below in last 7 years ending last day of month to one in which tenders are invited:-
Three similar works each costing not less than **Rs. 176.40 Lakh** OR two similar works each costing not less than **Rs. 264.60 Lakh** OR one similar work costing not less than **Rs. 352.80 Lakh**. **(Similar work shall mean SITC of Substation equipments)**
The completion certificate should be certified by an officer not below the rank of Executive Engineer / Project manager/ General Manager of a firm/owner for whom work is executed (if private works are shown in support of eligibility, certified copy of the tax deducted at source certificate (TDS) shall be submitted alongwith the experience certificate and the TDS amount shall tally with the actual amount of work done).
The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to last date of receipt of applications for bids.
 - 1.2.2 Valid electrical license issued by U.T. Electricity Department / any state electricity boards.
 - 1.2.3 Should have Certificate of Registration for GSTIN
 - 1.2.4 Should have had average annual financial turnover of **Rs. 132.30 Lakh** in works during the last three years ending 31st March 2024 on the proforma of Form A attached page 34 of the bid document. **(Scanned copy of certificate from CA to be uploaded).**
 - 1.2.5 Should not have incurred any loss in more than two years during the last five years ending 31st March 2024 on the proforma of Form B attached page 35 of the bid document. **(Scanned copy of certificate from CA to be uploaded).**
 - 1.2.6 Should have a solvency of not less than **Rs. 176.40 Lakh** issued by a scheduled bank on the proforma of form C attached at page 36 of bid documents **(scanned copy of the solvency certificate to be uploaded)**. The date of issue of solvency certificate shall not be more than six months prior to the stipulated date of submission
OR
Should have a Net worth Certificate of Value not less than **Rs 44.10 Lakh** issued by certified Chartered Accountant on the proforma of Form D attached page 36 of the bid document. **(Scanned copy of original Net worth Certificate to be uploaded).**
 - 1.2.7 Should have bidding capacity equal to or more than the estimated cost of the work put to tender on the proforma of form E attached at page-37 of bid documents **(Scanned copy of the original certificate to be uploaded)**. The bidding capacity shall be worked out by the following formula:
Bidding Capacity = {[AxNx1.5]-B}
Where, A = Maximum turnover during the last seven years taking into account the completed as well as works in progress. The value of completed works shall be brought to current costing level by enhancing at a simple rate of 7% per annum.

N = Number of years prescribed for completion of work for which bids have been invited.

B = Value of existing commitments and ongoing works to be completed during the period of completion of work for which bids have been invited

- 1.2.8 At the time of uploading the bids, the contractor is required to submit an undertaking from the OEM that:-
- Authorization certificate in favour of the contractor.
 - OEM will extend unconditionally support to the contractor technically throughout the execution period & CMC period for useful life of the system.
 - OEM will provide all the spares required for healthy functioning of the equipment for atleast seven years from the date of supply of equipment.
 - Manufacturer shall be compliant to the Public Procurement(Preference to Make In India), Order 2017 (as amended from time to time) issued by the Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry.
- 1.2.9 The **hybrid (Passive + Active) Power Factor correction** shall be got installed from the OEM / Channel partner of the OEM and commissioning report of the same shall be submitted by contractor after installation of the same.
- 1.2.10 **To become eligible, the bidders shall have to furnish an affidavit on non judicial stamp paper duly attested by a notary public or District magistrate as under:-**
- 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 bidding in PGI 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.
- I/We have not been blacklisted / debarred in any Govt. Deptts./ Boards/ Corporations/ Federations/ Agencies /any Autonomous Bodies in State of Haryana and other State/ Central Government Departments/Agencies etc. as on the date of submission of the bid in the present tender(**Scanned copy to be uploaded at the time of submission of bid**)
- Affidavit prior to the date of publication of E-Tender notice shall not be considered.**
- 1.2.11 It is presumed that all the bidders who have submitted the bid have gone through the entire bid documents including integrity pact and that all the terms & conditions are acceptable to them.
- Agreement shall be drawn with the successful bidders on CPWD General Conditions of Contract 2023 for Construction work which is available with the concerned Hospital Engineer and the bidders shall quote his rates as per various terms and conditions of the said form subject to the exclusions / modifications attached at page 25 which will form part of the agreement.
 - The time allowed for carrying out the work will be 6 **Months** 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 bid documents.
 - (i) The site for the work is available.**
(ii) The architectural and structural drawings shall be made available in phased manner, as per requirement of the same as per approved programme of completion submitted by the contractor after award of the work.
 - The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen on website <https://eprocure.gov.in/eprocure/app> and official website of the PGIMER www.pgimer.edu.in free of cost.
 - After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
 - While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.

8. When bids are invited in Three stage system and if it is desired to submit revised financial bid then it shall be mandatory to submit revised financial bid. If not submitted then the bid submitted earlier shall become invalid.
9. Earnest Money in the form of Demand Draft or Pay order or Banker's Cheque or Deposit at Call Receipt or Fixed Deposit Receipt (drawn in favour of **Postgraduate Institute of Medical Education And Research, Chandigarh**) shall be scanned and uploaded to the e-Tendering website within the period of bid submission.
A part of earnest money is acceptable in the form of bank guarantee also. In such case, minimum 50% of earnest money or Rs. 20 Lakh, whichever is less, shall have to be deposited in shape prescribed above, and balance may be deposited in shape of Bank Guarantee of any scheduled bank having validity for six months or more from the last date of receipt of bids which is to be scanned and uploaded by the intending bidders.
The original EMD or EMD exemption certificate for MSE/MSME as scanned & uploaded shall be deposited physically by all the intending bidders in the office of H.E. (Electrical) before opening of Eligibility cum Technical bid failing which the bid shall be treated as invalid.
Copy of Enlistment Order and certificate of work experience and other documents as specified in the press notice shall be scanned and uploaded to the e-Tendering website within the period of bid submission. However, certified copy of all the scanned and uploaded documents as specified in press notice shall have to be submitted by the lowest bidder within a week physically in the office of tender opening authority.
Online bid documents submitted by intending bidders shall be opened only of those bidders who have registered himself with M/s NIC Limited, Earnest Money Deposit and other documents scanned and uploaded are found in order.
The MSME firms registered in NSIC under PP policy are exempted from payment of EMD for goods and services only.
The bid submitted shall be opened on 09.06.2026 at 11:00 AM.
10. The bid submitted shall become invalid if:
- The bidder is found ineligible.
 - The bidder does not upload all the documents as stipulated in the bid document.
 - If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder in the office of bid opening authority.
 - The intending bidder does not deposit original EMD or EMD exemption certificate for MSE/MSME physically as scanned & uploaded upto 09.06.2026 at 10:30 AM.
 - If tendered quotes 'Nil' Charges against each item in item rate tender or does not quote any percentage above/ below on the total amount of the tender or any section / sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
11. The contractor whose bid is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the bid 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. 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, then the bidder shall be suspended for one year and shall not be eligible to bid for PGIMER tenders from date of issue of suspension order.
The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/ registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No. if applicable and also ensure the compliance of aforesaid provisions by the contractor, if any engaged by the sub-contractor for the said work and Programme Chart (Time and Progress) within the Period specified in Schedule F.

12. PRE-BID MEETING

Pre Bid conference shall be held before eligibility bid in the Committee room, Superintending Hospital Engineering & Planning, First floor, SPH building, Sec-12, PGIMER, Chandigarh on 28.05.2026 at 11:00 AM to clear the doubt of intending bidders, if any. Bidders are advised to go through complete tender documents including SOQ, Terms & Conditions, Design and Scope of work, Specification, Drawing, List of makes etc carefully for each service and come prepared for commercial / technical discussion on the same.

At this stage contractors are welcome to give their suggestion / improvement in specification / Design in addition to pointing out discrepancies if any.

Any doubt in respect to any condition / specification may be got clear during this stage. Based upon discussion held and decision taken in the pre bid meeting, revised tender documents/ corrigendum will be reloaded if required.

Pre bid meeting shall be held on single day.

13. The description of the work is as follows:**Up-gradation/New hybrid (Passive + Active) Power Factor correction for 10 nos. 11kV Substations, PGIMER, Chandigarh.**

Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids 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 bid. A bidder 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 bidders 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 bid by a bidders 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 Government and local conditions and other factors having a bearing on the execution of the work.

14. The competent authority on behalf of the Director PGIMER does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.


15. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.

16. The competent authority on behalf of the Director PGIMER reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.

17. The contractor shall not be permitted to bid 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 Superintending Hospital 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 relatives to any gazetted 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 Department.

18. 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 cancelled 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.
19. The bid for the works shall remain open for acceptance for a period of 75 days from the date of receipt of eligibility cum technical bids. If any bidder 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 bid 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 bidders shall not be allowed to participate in the rebidding process of the work.
20. This Notice inviting bid shall form a part of the contract document. The successful bidder/contractor, on an acceptance of his bid by the Accepting Authority, shall within 15 days from the stipulated date of start of the work sign the contract consisting of:
- The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings etc., if any, forming the tender as issued at the time of invitation of bid and acceptance thereof together with any correspondence leading thereto.
 - Standard Form 7/8 or other Standard Form as applicable.
21. **For Composite Bids(Not Applicable)**
- 21.1.1 The Hospital Engineer in charge of the major component will call bids for the composite work. The cost of bid document and Earnest Money will be fixed with respect to the combined estimated cost put to tender for the composite bid.
- 21.1.2 The bid document will include following three components:
- Part A:** - Form 6, Form 7/8 including schedule A to F for the major component of the work, Standard General Conditions of Contract for CPWD 2023, exclusions / modifications attached at Page No. 25.
- 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 components of the work (Hospital Engineer in charge of the major component shall also be competent authority under Clause 2 and Clause 5 as mentioned in Schedule A to F for major component), general / specific conditions, specifications and schedule of quantities applicable to minor components of the work.
- 21.1.3 The bidders must associate himself, with agencies of the appropriate class eligible to bid for each of the minor component individually *as per eligibility criteria specified at clause 1.2.10(i to iii) page 4 of DNIT*.
- 21.1.4 The eligible bidders shall quote percentage rates for all items of major component as well as for all items of minor components of work.
- 21.1.5 After acceptance of the bid by competent authority, the Hospital Engineer in charge of major component of the work shall issue letter of award on behalf of the Director, PGIMER. After the work is awarded, the main contractor will have to enter into one agreement with Hospital Engineer in charge of major component and has also to sign two or more copies of agreement depending upon number of Hospital Engineer in charge of minor components. One such signed set of agreement shall be handed over to Hospital Engineer in charge of minor component. Hospital Engineer of major component will operate part A and part B of the agreement. Hospital Engineer in charge of minor component(s) shall operate part C alongwith part A of the agreement.
- 21.1.6 Entire work under the scope of composite bid including major and all minor components shall be executed under one agreement.

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- 21.1.7 Security Deposit (PBG) will be worked out separately for each component corresponding to the estimated cost of the respective component of works.
- 21.1.8 The main contractor has to associate agency(s) for minor component conforming to eligibility criteria as defined in the tender documents and has to submit detail of such agency(s) to Engineer-in-charge of minor component within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer-in-charge of minor component.
- 21.1.9 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.
- 21.1.10 The main contractor has to enter into agreement with the contractor(s) associated by him for execution of minor component. Copy of such agreement shall be submitted to Hospital Engineer in charge of minor component as well as to Hospital 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.
- 21.1.11 Running payment for the major component shall be made by Hospital Engineer of major discipline to the main contractor. Running payment for minor components shall be made by the Engineer-Incharge of the discipline of minor component directly to the main contractor.
- 21.1.12 (a) The composite work shall be treated as complete when all the components of the work are completed. The completion certificate of the composite work shall be recorded by Engineer-in-charge of major component after the completion certificate of all other components.
- (b) Final bill of whole work shall be finalized and paid by the Hospital Engineer of major component. Engineer in charge of minor component will prepare and pass the final bill for their component of work and pass on the same to the Hospital Engineer of major component for including in the final bill for composite contract.
22. All the payments to the contractor shall be deposited in their bank account through RTGS and the contractor shall submit the detail of his bank account & IFSC code after award of work.
23. In case, date for opening of Eligibility /Technical/ Financial bid is declared/happens to be public holiday, the Eligibility / Technical/ Financial bid will be opened on the next working day.
24. The contractor shall comply to the "Solid Waste Management Byelaws 2018" & "Construction & Demolition Rules 2016". Any penalty imposed by the competent authority on account of non-compliance of these provisions, if not deposited in time by the contractor, would be recovered from the payment due to the contractor.
25. ***The contractor shall submit documentary evidence in support of GST amount deposited with the concerned authority, against the payment to be made by the Institute.***

<u>SECTION-IV</u>	INFORMATION AND INSTRUCTIONS FOR BIDDERS	
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INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR E-TENDERING FORMING PART OF BID DOCUMENT

The Hospital Engineer (Electrical), PGIMER Chandigarh invites on behalf of the Director PGIMER Chandigarh **online Percentage rate bids** from the Specialized agencies dealing in similar type of works on two bid system (Eligibility cum technical Bid & Financial Bid) for the following work :-

1.	NIT No.	PGI/Engg./Elect./2026-27/07
2.	Name of work & Location	Up-gradation/New hybrid (Passive + Active) Power Factor correction for 10 nos. 11kV Substations, PGIMER, Chandigarh.
3.	Estimated cost put to bid	Rs. 441.00 Lakh
4.	Earnest Money	Rs. 8,82,000/-
5.	Period of Completion	6 Months
6.	Date & Time for Pre Bid Meeting	28.05.2026 at 11:00 AM
7.	Last date & time for submission of bid	08.06.2026 at 11:00 AM
8.	Last date & time for submission of Original EMD or EMD exemption certificate for MSE/MSME	09.06.2026 at 10:30 AM
9.	Date & time for opening of Eligibility cum Technical bid.	09.06.2026 at 11:00 AM
10.	Date & time for opening of Financial bid	To Be Declare later

1. Contractors who fulfill the following requirements shall be eligible to apply. Joint ventures are not accepted.
 - a) Should have satisfactorily completed the works as mentioned below during the last Seven years ending last day of month to one in which tenders are invited:-
Three similar works each costing not less than **Rs. 176.40 Lakh** OR two similar works each costing not less than **Rs. 264.60 Lakh** OR one similar work costing not less than **Rs. 352.80 Lakh. (Similar work shall mean SITC of Substation equipments)**
The completion certificate should be certified by an officer not below the rank of Executive Engineer / Project manager/ General Manager of a firm/owner for whom work is executed (if private works are shown in support of eligibility, certified copy of the tax deducted at source certificate (TDS) shall be submitted alongwith the experience certificate and the TDS amount shall tally with the actual amount of work done).
The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to last date of receipt of applications for bids.
The enlistment of the contractors should be valid on the last date of submission of bids.
In case the last date of submission of bid is extended, the enlistment of contractor should be valid on the original date of submission of bids.
 - b) Proof of valid electrical license issued from U.T. Electricity Department / any state electricity boards.
 - c) Should have Certificate of Registration for GSTIN

- d) Should have had average annual financial turnover of **Rs. 132.30 Lakh** in works during the last three years ending 31st March 2024 on the proforma of Form A attached page 34 of the bid document. **(Scanned copy of certificate from CA to be uploaded).**
- e) Should not have incurred any loss in more than two years during the last five years ending 31st March 2024 on the proforma of Form B attached page 35 of the bid document. **(Scanned copy of certificate from CA to be uploaded).**
- f) Should have a solvency of not less than **Rs. 176.40 Lakh** issued by a scheduled bank on the proforma of form C attached at page 36 of bid documents **(scanned copy of the solvency certificate to be uploaded).** The date of issue of solvency certificate shall not be more than six months prior to the stipulated date of submission
OR
Should have a Net worth Certificate of Value not less than **Rs 44.10 Lakh** issued by certified Chartered Accountant on the proforma of Form D attached page 36 of the bid document. **(Scanned copy of original Net worth Certificate to be uploaded).**
- g) Should have bidding capacity equal to or more than the estimated cost of the work put to tender on the proforma of form E attached at page-37 of bid documents **(Scanned copy of the original certificate to be uploaded).** The bidding capacity shall be worked out by the following formula:
Bidding Capacity = {[AxNx1.5]-B}
Where,
A = Maximum turnover during the last seven yearstaking into account the completed as well as works in progress. The value of completed works shall be brought to current costing level by enhancing at a simple rate of 7% per annum.
N = Number of years prescribed for completion of work for which bids have been invited.
B = Value of existing commitments and ongoing works to be completed during the period of completion of work for which bids have been invited
- h) At the time of uploading the bids, the contractor is required to submit an undertaking from the OEM that:-
i) Authorization certificate in favour of the contractor
ii) OEM will extend unconditionally support to the contractor technically throughout the execution period & CMC period for useful life of the system.
iii) OEM will provide all the spares required for healthy functioning of the equipment for atleast seven years from the date of supply of equipment.
iv) Manufacturer shall be compliant to the Public Procurement(Preference to Make In India), Order 2017 (as amended from time to time) issued by the Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry
- i) The **hybrid (Passive + Active) Power Factor correction** shall be got installed from the OEM / Channel partner of the OEM and commissioning report of the same shall be submitted by contractor after installation of the same.
2. The intending bidder must read the terms and conditions of Form-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
3. Information and Instructions for bidders posted on website shall form of bid document.
4. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from the website: <https://eprocure.gov.in/eprocure/app> and official website of the PGIMER [www. pgimer.edu.in](http://www.pgimer.edu.in). free of cost.
5. But the bid can only be submitted after uploading the mandatory scanned documents such as Demand Draft or Pay order or Banker`s Cheque or Deposit at call Receipt or Fixed Deposit Receipts and Bank Guarantee of any Scheduled Bank towards EMD in favour of **Postgraduate Institute of Medical Education And Research, Chandigarh** and other documents as specified.
6. Those contractors not registered on the website mentioned above, are required to get registered beforehand. If needed they can be imparted training on online bidding process as per details available on the website.
7. The intending bidder must have valid class-III digital signature to submit the bid.

8. On opening date, the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.
9. Contractor can upload documents in the form of **JPG** format and **PDF** format.
10. **Certificate of Financial Turnover:** At the time of submission of bid contractor may upload Affidavit/ Certificate from CA mentioning Financial Turnover of last 3 years or for the period as specified in the bid document and further details if required may be asked from the contractor after opening of technical bids. There is no need to upload entire voluminous balance sheet
11. Contractor must ensure to quote percentage rate in the schedule of Quantity. The column meant for quoting percentage rate in figures appears in pink colour and the moment rate is entered, it turns sky blue.
12. The agency shall submit the status of his firm w.r.t. proprietary firm / partnership firm or Limited company as per detail given below:-

If the bidder is a proprietary firm, a self undertaking of the proprietorship shall be uploaded by the bidder. If the bidder is a firm in partnership, the bid documents shall be signed by all the partners of the firm above their full typewritten names and current addresses, or, alternatively, by a partner holding power of attorney for the firm. In the later case a certified copy of the power of attorney should be uploaded. In both cases a certified copy of the partnership deed and current address of all the partners of the firm should also be uploaded.

If the bidder is a limited company or a corporation, the bid documents shall be signed by a duly authorized person holding power of attorney for signing the bid documents accompanied by a copy of the power of attorney/ Authorization Letter. The bidder should also furnish a copy of the Memorandum of Articles of Association duly attested by a Public Notary.

13. The eligibility bid shall be opened first on date and time as mentioned above. The time and date of opening offinancial bid of contractors qualifying the eligibility bid shall be communicated to them at a later date.

LIST OF DOCUMENTS TO BE SCANNED AND UPLOADED WITHIN THE PERIOD OF BID SUBMISSION:

- I. Earnest Money Deposit as per detail given in Clause No. 9 at page 5 of the DNIT.
- II. Certificates of Work Experience as per detail given in Clause No. 1.2.1 at page 3 of the DNIT.
- III. Valid electrical license as per detail given in Clause 1.2.2 at Page no. 3 of the DNIT.
- IV. Valid GSTIN No.
- V. Certificate of Financial Turnover from CA as per detail given in Clause No. 1.2.4 at page 3 on the proforma of Form A attached page 34.
- VI. Certificate of Profit & Loss from CA certifying as per detail given in Clause No. 1.2.5 at page 3 on the proforma of Form B attached page 35.
- VII. Bank solvency form a scheduled bank as per detailed given in Clause No. 1.2.6 at page 3 on the proforma of Form C attached page 36.
OR
Networth Certificate from a certified Chartered Accountant as per detail given in Clause No. 1.2.6 at page 3 on the proforma of Form D attached page 36.
- VIII. Bidding capacity as per detail given in Clause No. 1.2.7 at page 3 on the proforma of Form-E attached at page 37
- IX. At the time of uploading the bids, the contractor is required to submit an undertaking from the OEM as per detail given in Clause No. 1.2.8 at page 4 of the DNIT.
- X. Affidavit on non judicial stamp paper duly attested by a notary public or District magistrate as underas per detail given in Clause No. 1.2.10 at page 4 of the DNIT.
- XI. Status of firm as per detail given in Clause No. 12 at page 11 of the DNIT

SECTION-V	TENDER AND CONTRACT	
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Percentage Rate Tender & Contract For Works

Tender for the work of: Up-gradation/New hybrid (Passive + Active) Power Factor correction for 10 nos. 11kV Substations, PGIMER, Chandigarh.

- | | |
|---|------------------------|
| a) Date & Time for Pre Bid Meeting | 28.05.2026 at 11:00 AM |
| b) Date & time for submission of bid | 08.06.2026 at 11:00 AM |
| c) Date & time for submission of original EMD | 09.06.2026 at 10:30 AM |
| d) Eligibility Bid To be opened online on | 09.06.2026 at 11:00 AM |

TENDER

I/we have read and examined the notice inviting tender, schedule A, B, C, D, E & F specifications applicable, Drawings and Designs, General Rules and Directions, conditions of Contract, clauses of contract, special conditions, additional terms & conditions & specifications, schedule of rate and other documents and rules referred to in the conditions of contract and all other contents in the tender documents for the work.

I/we hereby tender for the execution of the work specified for the Institute within the time specified in schedule 'F' viz. schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of general rules and Directions and in Clause 11 of the conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

I/we agree to keep the tender open for 75 days from the receipt of eligibility cum technical bids and not to make any modifications in its terms and conditions.

A sum of **Rs. 8,82,000/-** is hereby forwarded in the shape of deposit at call receipt of a scheduled bank/ demand draft of a scheduled bank/ Fixed deposit receipt of scheduled bank in favour of **Postgraduate Institute of Medical Education And Research, Chandigarh** payable at Chandigarh as earnest money. If I/We, fail to furnish the prescribed performance guarantee within prescribed period. I/We agree that the said the Director, PGIMER or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that Director PGIMER or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely. The said performance guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carryout such deviation as may be ordered upto maximum of the percentage mentioned in Schedule-F and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

Further, I/We agree that in case of forfeiture Earnest Money & Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

I/We undertake and confirm that eligible similar work(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 PGI 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.

I/We hereby declare that I/We shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the Institute.

Dated:-	Signature of Contractor
	Postal Address:
Witness:	
Address:	Telephone No.:
	Fax No.:
Occupation:	E-Mail.:

ACCEPTANCE


The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the Institute for a sum of Rs. _____

The letters referred to below shall form part of this contract agreement:

- i) _____
- ii) _____
- iii) _____

Dated _____

Hospital Engineer (Electrical)
For & on behalf of the Director,
PGIMER, Chandigarh

SECTION-VI	INTEGRITY PACT	
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To,

.....,
.....,
.....

Sub: NIT No. PGI/Engg/Elect../2025/ for the work of **Up-gradation/New hybrid (Passive + Active) Power Factor correction for 10 nos. 11kV Substations, PGIMER, Chandigarh.**

Dear Sir,

It is here by declared that PGIMER, CHANDIGARH is committed to follow the principle of transparency, equity and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender/bid documents, failing which the tenderer/bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the Institute.

Yours faithfully

Hospital Engineer (Electrical)

To,

Hospital Engineer (Electrical),

.....,

.....

Sub: Submission of Tender for the work of **Up-gradation/New hybrid (Passive + Active) Power Factor correction for 10 nos. 11kV Substations, PGIMER, Chandigarh.**

Dear Sir,

I/We acknowledge that PGIMER, CHANDIGARH is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process.

I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT. I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by PGIMER, CHANDIGARH. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, PGIMER, CHANDIGARH shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid in accordance with terms and conditions of the tender/bid.

Yours faithfully

(Duly authorized signatory of the Bidder)

To be signed by the bidder and same signatory competent / authorized to sign the relevant contract on behalf of Institute.

INTEGRITY AGREEMENT

This Integrity Agreement is made at on thisday of20..... **BETWEEN** Director PGIMER, Chandigarh represented through Hospital Engineer, (Electrical), PGIMER, Chandigarh (Hereinafter referred as the (Address of Division) ‘**Principal/Owner**’, which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

..... (Name and Address of the Individual/firm/Company) through (Hereinafter referred to as the (Details of duly authorized signatory) ‘**Bidder/Contractor**’ and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns) **Preamble** WHEREAS the Principal / Owner has floated the Tender (NIT No.....) (hereinafter referred to as ‘**Tender/Bid**’) and intends to award, under laid down organizational procedure, contract for (Name of work) hereinafter referred to as the ‘**Contract**’.

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as ‘**Integrity Pact**’ or ‘**Pact**’), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:

(a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

(b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.

(c) The Principal/Owner shall endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.

2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Institute all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.

2) The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:

a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.

b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.

c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

d) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose (with each tender as per proforma enclosed) any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

3) The Bidder(s)/Contractor(s) will not instigate third persons to omit offences outlined above or be an accessory to such offences.

4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Institute interests.

5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes.

The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.

2) Forfeiture of Performance Guarantee/Security Deposit: If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Performance Guarantee and Security Deposit of the Bidder/Contractor.

3) Criminal Liability: If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of Indian Penal code (IPC)/Prevention of Corruption Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.

2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.

3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/ Subcontractors

1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/ sub-vendors.

2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.

3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 24 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded. If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority of PGIMER, Chandigarh.

Article 7- Other Provisions

1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Chandigarh.

2) Changes and supplements need to be made in writing. Side agreements have not been made.

3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.

4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contract documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....
(For and on behalf of Principal/Owner)

.....
(For and on behalf of Bidder/Contractor)


WITNESSES:

1.
(signature, name and address)

2.
(signature, name and address)

Place:

Dated :

SECTION-VII	PROFORMA OF SCHEDULE A TO F	
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SCHEDULE 'A'

Schedule of quantities attached at page no. 39-46 of DNIT

SCHEDULE 'D'

Extra schedule for specific requirements / documents for the work, if any:

As mentioned in tender documents**SCHEDULE 'E'**

Reference to General Conditions of contract.

CPWD General Condition of Contract 2023 for Construction Works.

Name of Work :

Up-gradation/New hybrid (Passive + Active) Power Factor correction for 10 nos. 11kV Substations, PGIMER, Chandigarh.

Estimated cost of work :

Rs. 441.00 Lakh

Earnest Money :

Rs. 8,82,000/-

Performance Guarantee :

5% of the tendered value

Security Deposit :

2.5% of the tendered value**SCHEDULE 'F'****GENERAL CONDITION OF CONTRACT****Officer inviting tender****Hospital Engineer (Electrical)
PGIMER, Chandigarh.****GENERAL RULES & DIRECTIONS**

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**Definitions:**

2 (v)	Engineer- in- charge	Hospital Engineer (Electrical) PGIMER, Chandigarh.
2 (viii)	Accepting Authority	Director PGIMER, Chandigarh.
2 (x)	Percentage on cost of material and labour to cover all overheads and profits	15%
2 (xi)	Standard Schedule of Rates	DSR 2022 (E&M)
2 (xii)	Department	P.G.I.M.E.R., CHANDIGARH

9 (ii) Standard contract Form Form-7/8, CPWD General Conditions of Contract 2023 for Construction works.

Clause 1

(iv) Time allowed for submission of Performance Guarantee, Programme Chart (Time and Progress) and applicable labour licenses registration with EPFO, ESIC and BOCW Welfare Board or proof of applying thereof from the date of issue of letter of acceptance **15 days**

(v) Maximum allowable extension **with late fee @ 0.1 % per day of performance guarantee amount** beyond the period provided in (i) above **07 days**

Clause 2

Authority for fixing compensation under clause-2 **Superintending Hospital Engineer, PGIMER, Chandigarh**

Clause2A **Applicable clause2 / clause 2A** **Clause-2**

Clause 5 Number of days from the date of issue of letter of acceptance for reckoning date of start = 15 Days

Mile stones(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
1.	25% of tendered value	1/4 th of total time	In the event of not achieving the necessary progress as assessed from the running payment, 1.25% of the tendered value of work will be withheld for failure of each milestone from SI No 1 to 4. Maximum amount to be with held shall not exceed 5% of tendered value of work.
2.	50% of tendered value	1/2 of total time	
3.	75% of tendered value	3/4 th of total time	
4.	100% of tendered value	Full time	

Time allowed for execution of work 06 Months

Authority to decide:

- (i) Extension of time : **Superintendent Hospital Engineer**
- (ii) Rescheduling of mile stones : **Superintending Hospital Engineer or his successor**
- (iii) Shifting of date of start in case of delay in handing over of site: **SuperintendingHospital Engineer**

PROFORMA OF SCHEDULES**Clause 5 Schedule of handing over of site:**

Part	Part Portion of site	Description	Time Period for handing over reckoned from date of issue of letter of intent.
Part A	Portion without any hindrance	Site is available	15 days
Part B	Portions with encumbrances	--	--
Part C	Portions dependent on work of other agencies	--	--

Applicable Clause 5 / Clause 5A **Clause-5**

Clause 7 **Gross work to be done together with net payment /adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment** **Rs. 74.00 Lakh**

Clause 7A **Whether Clause 7A shall be applicable** **Applicable**

Clause 10A **List of equipments to be provided by the contractor at site lab.**
 1.....2..... As per site requirement
 3.....4.....
 5.....6.....

10B(ii) **Whether Clause 10 B (ii) shall be applicable** **Applicable**

Clause 10C **Component of labour expressed as percent of value of work =** **Applicable**

Clause 10CC **Payment due to increase/decrease in Prices/Wages** (Not Applicable)

Clause 11 **Specifications be followed for execution of work.**

- i) NIT Specifications.
- ii) Latest CPWD Specifications with amendments.
- iii) Bureau of Indian Standards wherever no such specifications exists in S.No. i) & ii).

Clauses 12 Authority to decide deviation upto 1.5 times of tendered amount **Superintending Hospital Engineer PGI, Chandigarh.**

Type of work Construction work

12.2 & 12.3 Deviation limit beyond which clause 12.2 & 12.3 shall apply for building work 100%

12.5 i) Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for foundation Work (except item mentioned in earth work subhead in DSR and related items) 100%

ii) Deviation Limit for items in earth work subhead of DSR and related items 100%

Clause 16 Competent authority for deciding reduced rates **Superintending Hospital Engineer PGI, Chandigarh.**

Clause 18 List of mandatory machinery, tools & plants to be deployed by the contractor at site/ manufacturing unit:-.

As per site requirement

Clause 19C Authority to decide penalty for each default. **Hospital Engineer (Electrical), PGIMER, Chandigarh.**

Clause 19D Authority to decide penalty for each default. **Hospital Engineer (Electrical), PGIMER, Chandigarh.**

Clause 19G Authority to decide penalty for each default. **Hospital Engineer (Electrical), PGIMER, Chandigarh.**

Clause 19K Authority to decide penalty for each default. **Hospital Engineer (Electrical), PGIMER, Chandigarh.**

Clause 25		
(i)	Conciliator	Director, PGI, Chandigarh.
(ii)	Arbitrator Appointing Authority	Director, PGI, Chandigarh.
(iii)	Place of Arbitration	Chandigarh


Clause 32 Requirement of Technical Representative(s) and recovery Rate

.No.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical/ Technical Representative)	Minimum Experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i)	
						Figures	Words
1.	Graduate Engineer OR Diploma Holder	Electrical	(Project Manager cum Planning/Quality Site/billing Engineer)	2 Years OR 5 Years	01	Rs. 15,000/- P/month	Rs. Fifteen thousand only P/month

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

Diploma holder with minimum 10 year relevant experience with a reputed Electrical co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.

Clause 38 (NOT APPLICABLE)

SECTION-VIII	EXCLUSIONS / MODIFICATIONS IN CPWD GENERAL CONDITIONS OF CONTRACT 2023 (CONSTRUCTIONWORKS)	
Clause No. & Page No. of CPWD 2023	Exclusions / Modifications	
<u>CONDITIONS OF CONTRACT</u>		
i) Clause 2 (iv), Page 9	The word President / President of India and his successors wherever appears shall be read as the Director, PGIMER and his successors.	
ii) Clause 2 (v), Page 9	The word Government or Government of India wherever appears shall be read as PGIMER, Chandigarh.	
iii) Clause 2 (vi), Page 9	The Engineer-in-charge means the Hospital Engineer (Electrical) who shall supervise and be Incharge of the work and who shall sign the contract on behalf of the Director, PGIMER as mentioned in Schedule 'F' hereunder.	
iv) Clause 2 (xi), Page 10	Department shall means Director, PGIMER or any Division of PGIMER which invites tenders on behalf of Institute as specified in the Schedule 'F'.	
<u>CLAUSES OF CONTRACT</u>		
v) Clause 9, Page 24	The following provisions under this clause are not applicable:- If the final bill is submitted by the contractor within the period specified above and payment of final bills is made by the deptt. after prescribed time limit , a simple interest @ 5 % per annum shall be paid to the contractor from the date of expiry of prescribed time limit which will be compounded on yearly basis, provided the final bill submitted by the contractor is found to be in order.	
vi) Clause 30, Page 47	<p>The following provisions are also added in this clause:</p> <p>ii) The Engineer-in-Charge shall make alternative arrangements for supply of water at the risk and cost of contractor(s) if the arrangements made by the contractor(s) for procurement of water are in the opinion of the Engineer-in-Charge, unsatisfactory. In such case, water charges @ 1.5 % shall be recovered on gross amount of the work done.</p> <p>The contractor shall take water connection from source of Municipal Corporation, Chandigarh / Chandigarh Administration at his own cost. He will pay the bills raised by concerned department regularly. However, PGIMER will help the contractor to take connection from concerned authority. If, the contractor fails to deposit the water bill, the Engineer Incharge will have the authority to deduct the such amount from contractor's bills and deposit the same to concerned department.</p> <p>iii) The contractor shall make his own arrangements for power supply including laying of cables, switchgears and energy meter for the required load upto the main source of U.T. electricity department / Institute's source of supply (If U.T. electricity is not available) at his own cost for the proper execution of the work and will pay the charges for the electric power consumed.</p>	

SECTION-IX	ADDITIONAL TERMS AND CONDITIONS OF CONTRACT	
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1. The successful tenderer must sign the Integrity pact Annexed in section-VI at page 15 of the DNIT after award of work.
2. PGIMER reserves the right to accept/reject any or all tenders without assigning any reason thereof.
3. All the disputes concerning this tender in any way are subject to Chandigarh Jurisdiction only.
4. **Tenderers 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 booklet 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 PGIMER. The contractor shall also be deemed to have acquainted himself with local conditions and other factors which have a bearing on the execution of the works.

- No claim will be entertained on account of ignorance of site conditions.

5. **CONTRACTOR SHALL SUBMIT FABRICATION DRAWING FOR OBTAINING APPROVAL**

The contractor shall submit fabrication drawing in triplicate for obtaining preliminary approval of the Engineer-in-Charge for all design drawings structural steel elements, **electrical panels and Air-Conditioning ducts wherever required**. One copy of this drawings duly corrected and signed wherever necessary by Institute will be returned to the contractor for preparing and resubmitting drawings after incorporating the said corrections again in triplicate for final approval. Along with the completion and approval of fabrication drawing, the contractor shall also submit the materials list, for checking and approval to the institute. No drawing shall be approved finally without material list. Once the drawing is finally approved, no request for any alternative section will be entertained. The contractor shall also submit **3 copies** of design calculations for the designs of joints **if required** All joints shall be designed for full strength of members, unless otherwise specified. Approval of fabrication drawings however will not absolve the contractor of his responsibility for the safety and correctness of the fabrication.

6. **SALE OF TENDERS TO CONTRACTORS WITH A BLEMISHED RECORD**

If the Engineer In-charge receives adverse report against any working contractor of the Institute, either from the department in which he is enlisted or from any other Department or Hospital Engineers of the Institute, he may stop issue of tenders to that contractor on the basis of such a report.

On the receipt of a case of adverse performance/ Misbehavior/ Threatening of site staff or any other such reasons, the Director PGIMER shall issue show cause to such contractors and after considering their reply, He shall have full powers to debar such contractor for a period as decided by him. Such debarred contractor shall be ineligible to take up any work in the Institute during the period of debarring.

A copy of such orders shall be posted on PGIMER website so that every field unit of the Institute becomes aware and does not issue tender to such debarred contractors.

If the NIT approving authority not lower than the rank of Superintending Hospital Engineer is satisfied that it is in the interest of the Institute to allow a contractor who has been debarred for reason of inactivity, to participate in the tendering process for getting competitive tenders, he may do so.

7. WORK AND WORKMANSHIP

To determine the acceptable standard or workmanship, the Engineer-in-Charge may order the contractor to execute certain portions of works and service such as walls, flooring, joinery, finishes, roads and the like under the close supervision of the Engineer-in-Charge. On approval, these items shall be labeled as guiding samples and works executed to conform to these samples.

8. WORK IN TWO SHIFT:

To speed-up the work, the institute may direct the agency to work in **Two shifts** and the tenderer will have to make adequate arrangements for carrying out work in Two shifts for which nothing extra shall be payable

9. GATE PASSES

All tools and plants, surplus/dismantled/ rejected/ materials to be taken away by the contractor from the work site should have a valid gate pass (4 copies) issued by the competent authority of the Institute. One copy of the gate pass shall be delivered to the security staff, one copy at the Exit gate, the third copy shall be retained by the contractor and fourth copy shall be retained by the officer issuing the gate pass.

10. All other information such as documents and drawing supplied by the tenderer will also be in the English language only. Drawing and designs shall be dimensioned according to the metric system of measurements.
11. Tenders who do not full fill all or any of the conditions laid down in this notice, or contain conditions not covered and/or not contemplated by the General Conditions of contract and /or expressly prohibited therein or stipulated addition/alternative conditions shall be liable to be rejected.
12. 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.
13. Each tenderer shall upload only one tender; either by him or as partners in a joint venture. A tenderer who uploads more than one tender will be disqualified.
14. 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.
15. Interpretations, corrections and changes to the Tenders Documents shall be made by Addendum, if required.
16. The quantities taken in the tender can be executed at anywhere in the Institute as per requirements and directions of Engineer Incharge and Contractors shall be bound to execute the same without claiming anything extra.
17. The Contractor shall strictly comply with the provision of EPF/ESI acts and shall furnish PF/ESI codes. It would however, be mandatory on the part of the contractor to provide proof of having deposited PF and ESI contribution as per law provides together with PF account number of employees in whose account the amount has been deposited (As an affidavit duly attested by Ist class Magistrate) on completion of work. Security shall be released after receipt of the above.

SECTION-X	TECHNICAL SPECIFICATIONS	
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HYBRID POWER FACTOR CORRECTION PANEL

1. SCOPE

Design, assembly / fabrication, installation, testing and commissioning of 3 phases, 415 V, 50 Hz TP&N PFC system (Auto + manual option) with Heavy Duty type capacitors, microprocessor-based controller and aluminum wound type detuned filter. The unit shall improve the monthly average power factor and mitigate harmonic distortion on the LV bus. Hybrid Harmonic filter shall comprise two separate Section for harmonic correction and power factor improvement. Harmonic compensation shall be done through IGBT based Active Harmonic filter and Power factor correction shall be done through Automatic Power Factor Correction panels with passive detuned filters.

Detailed specifications of Active Harmonic Filter and detuned APFC panel shall separate panels as below:

SECTION 1 - ACTIVE HARMONIC FILTER

a) Active Harmonic Filter to mitigate low voltage system harmonics

The Active Harmonic Filter (Type AHF) is intended to remove harmonic distortion from the phase conductors in a 3-phase electrical system resulting in reduced phase current, reduced current distortion and reduced upstream electrical system harmonic voltage distortion.

Principle of operation

AHF should measure level of harmonics in supply line and eliminate it by generating the counter harmonics. It should employ a DSP which determines the harmonic current amplitude to be injected in the opposite phase angle of each harmonic order. -

The active filter shall not only provide harmonic mitigation, but also, power factor correction and load balancing. Harmonic correction, PF correction and Unbalance correction should be able to set with priority and filter should work to employ the priority as per the user settings.

- The active harmonic filter shall mitigate harmonics from the 2nd harmonic up to the 50th harmonic and limit harmonic distortion at their point of connection to within the harmonic limits specified herein. The active filter shall be connected in parallel (shunt) to the load.
 - The active filter shall be suitable for connection at an electrical distribution panel, transformer secondary or at an individual load.
 - The active filter shall be suitable for connection to a distorted voltage source and its operation shall not be adversely affected by pre-existing voltage distortion.
 - The active filter shall be suitable for operation on an electrical system having a generator as its power source.
 - AHF should have high attenuation up to 97% of individual harmonics.
 - AHF shall allow user to select any all order of harmonics out off 2nd to 49th harmonics order.
 - It should be possible to use filter for single harmonic elimination
 - PF compensation should be leading as well as lagging.
- b) Following features are essential requirements for the point of reliability**
- For capacities from 100 Amp onwards the filter design should adapt modular construction

- The display should be Touch screen SVGA display with true RMS readout & FFT analysis. The wave form should be visible on the display.
 - High grade cooling fans shall be used.
 - In case of future repair requirements, the same shall be done through card level replacement and not the whole module
- c) Electrical Ratings:
- System Voltage: 400V AC \pm 10%, 3ph 4 Wire/3 wire
 - Line voltage tolerance: \pm 10%
 - System Frequency: 50 / 60 Hz
 - Frequency tolerance: 50 Hz \pm 5%
 - Harmonic Cancellation Current: [30, 60, 100,120,150 amps]. Multiple filter units for parallel connection may be used to achieve total current requirements for combined power factor correction and harmonic mitigation.
 - Possible units of same ratings connected in parallel: Up to four (8).
 - Current transformers shall be with Class 0.5 or better with 15VA rating.
 - Flexibility to select CT ratio shall be also be available.
 - Remote indication contacts: 1No. potential free contact.
 - Surge withstand capability per ANSI/IEEE STD C62.41-1991.
 - CE certified valid ROHS,REACH certificate and IEC-60529 IP-42
 - Electromagnetic standard FCC 15J,Class-A IEC 61000-4 and ANSI IEEE Standard 519-2014 (Harmonics LIMITS)
 - CE-UL -508/IEC 60204-1.EN 50178
2. Basic Product Requirements
- The active harmonic filter shall meet the following basic requirements:
- a) Active filters shall include input surge suppression.
 - b) Active filters shall include forced air cooling system.
 - c) Active filter shall be able to connect in both open loop and closed loop configuration
 - d) Active filter should have a HMI touch screen display having the functionality of a power analyzer and should display Load side, supply side and filter parameters as mentioned below
 - Voltage ,Current ,Power factor,Filter Temperature
 - Voltage and current waveforms
 - Voltage and current Harmonic spectrum
 - Active, Reactive & Apparent Power
 - Alarm indications & log details
 - Product warranty period shall be one (1) year.
 - Active filter shall be isolated from the power supply when powered “off”.
 - IGBT modules shall be self-protected for maximum reliability.
 - Each power module shall have its own independent set of fuses.
 - The response time shall be at least less than 100 micro sec and the correction time shall be 1 cycle.
 - AHF shall have in build logic to avoid over-loading without tripping.
 - e) Construction:
 - Constructed on metal panel with minimum IP 20.
 - Filter shall be suitable for operation within an ambient temperature between 0oC and 40oC.
 - Shall be able to work with higher temperature with automatic de-rating (70%capacity at 50 oC).
 - Storage temperature shall be from 0oC to 70oC.
 - Active filters shall be suitable for operation in relative humidity up to 95% non-condensing.

SECTION 2 - APFC Panels with passive filters:

Automatic Power Factor Correction panel shall be totally enclosed, metal clad, sheet steel fabricated, fixed feeder type, dust and vermin-proof, free standing, floor mounting type. The enclosure shall be pre-treated as per 7 tanks process and finished with powder coating of shade RAL 7032. The panel shall be factory build to ensure

- Proper thermal design, by providing louvers and fans in appropriate location,
- Accurate selection of switchgear, capacitors-reactors and others in the panel.
- Safety during operation, inspection and maintenance

BASIC DESIGN SPECIFICATIONS

An automatic power factor correction relay, microprocessor based, with arrangement for sensing the power factor of the inductive load (maximum 14 channels) and giving signal to the feeders of power capacitors as per the setting of P.F. and electronic circuit to ensure that once a capacitor gets cut off, it is not put on at least for a minute. The relay should automatically manage capacitor banks according to the reactive power required to correct the power factor of the load to the power factor set on the relay. The capacitors must be turned “on” and “off” to correct the power factor of the load to the power factor set on the relay. The relay should have automatic and manual mode of operation with an LED to indicate the operating mode. The auto / manual function makes it possible to turn the capacitor banks “on” and “off” manually regardless of the line value measured.

Rated System Voltage	415 V / 380 V / 400 V/440V
Rated Frequency	50 Hz
Short Circuit Rating	> 36 Ka
Altitude	1000 m
Duty	Continuous
Ambient temperature	-5° C to 45° C
Power Supply	Three phase, four line
Relay current input signal	-- / 5A, from CT on line
Enclosures	The load bearing structure is made of 2 mm sheet steel
	The front door and partition are made of 1.6 mm sheet steel
	The internal switchgear components are accessible on opening the front door and Capacitors & Reactors shall be accessed through back door
	Ingress protection - IP42
Installation	Indoor, wall mounted (up to 100 kVAr), floor mounted (100 kVAr and above) in a well-ventilated, non-dusty environment, cable entry from bottom
Control	Auto + Manual
Incomer	3 Pole MCCBs up to 630 A(400 kVAr) , 3 Pole ACBs above 630 A(above 400kVAr)

Other important features required are:

- Various system parameter display on APFC Relay
- Fully automatic / manual setup and operation
- Minimal joining in all the connections to ensure better reliability and lower losses.
- Use of special connecting cables suitable for high temperature withstands.
- Flush mounted meter to indicate line voltage and current.

CAPACITOR BANK:

Capacitor voltage shall be minimum 525 V when used with 14% Aluminum reactors. Capacitors shall be double side metallized Polypropylene film with wave cut design for better conductivity and Concentric winding design to minimize the internal losses having inert gas (N₂) impregnated. The capacitor unit shall have over pressure dis-connector protection. Discharge resistance shall reduce the residual voltage to less than 50 volts within one minute.

General specifications:

- 3 phase, delta connected, 50 Hz
- Overvoltage +10% (for 8h / 24h), + 15% (for 30m / 24h), + 20% (5m/24h), +30% (1m/24h)
- Overcurrent: 1.8 x I_n
- Peak Inrush current withstands: 400x I_n
- Total watt-losses: < 0.45 W / kVAr
- No of switching Max 12500 per year.
- Life expectancy up to 2,00,000 hrs.
- Temperature category: -40° C to 55° C
- IEC 60831
- Capacitor must be IS marking/IS 13340-1(2012)

DETUNED FILTER

- Detuned harmonic filter reactors shall be used along with power capacitors to mitigate harmonics amplification and to avoid electrical resonance in LV electrical networks.
- The complete unit shall be impregnated under vacuum and over-pressure in impregnation with inert Gas. The insulation of reactor shall be Class H.
- The reactors shall be made of high-grade aluminum foil type windings which offer large surface area to mitigate the skin effect under harmonic presence and have a three phase, iron core construction suitable for indoor use. The reactor shall be air cooled, and the layout shall be in accordance with IEC 60289 / IS 5553.
- The permitted tolerance of inductance is $\pm 5\%$ of rated inductance value.
- Reactor tuning factor shall be 14% (139 Hz) and the current rating of the reactor shall include the effects of harmonics and other possible over-currents
- The limit of linearity of inductance of the filter reactor is minimum 143% or $1.43 \cdot I_n$ with $L=0.95 \cdot L_N$.
- The reactor shall be fitted with a temperature sensitive micro-switch in the center coil (normally open) for connection to trip circuits in case of high operating temperatures.
- Power loss in each reactor shall be less than 5 W/kVAr
- Each reactor shall have routine test certificate for the above tests.

Contactors

- All contactors shall be AC6B duty 3 pole air-break, magnetic, capacitor duty type. The rating of contactor shall be suitably assigned. The contactors shall be so chosen as to withstand inrush current due to parallel switching. Contactor should be with damping resistors to limit capacitor charging current
- The individual capacitor bank/step shall be switched automatically / manually with selector switch as required using magnetic contactors suitable for switching capacitive currents. The contactor coil voltage shall be as specified.
- The minimum life expectancy of the contactor shall be one million switching operations
- Contactor should be with surge suppressor
- Operation voltage up to 690V
- Insulation voltage 1 kV
- Rated impulse withstand up to 8 kV

APFC Controller

The APFC controller should be microprocessor based and should correct power factor with the help of contactors by switching the required no. capacitor banks.

The controller should offer power factor correction without any need for manual intervention. The controllers should decide optimum configuration of capacitor banks in order to achieve desired power factor by taking into consideration the kVAR of each step, no of operations, total usage time, re-connection time of each step etc. Besides, manual switching of capacitors should also be possible directly through the controller, The APFC controller should have the following basic features.

- Backlit LED display with multiple parameters displayed at the same time
- Auto step programmable
- Capable of measuring VTHD and ITHD values at least up to 15th order
- Automatic CT reversal sensing and correction
- It should be 1A / 5A CT selectable.
- Sensing shall be done at LT as well as HT side of the transformer
- Display of average weekly power factor
- Keypad lock feature to prevent operation by unauthorized persons
- Alarms for under/over compensation, high VTHD/ITHD, over temperature, capacitor failure, capacitor over-current, over/under voltage
- Individual capacitor's ON/OFF status and capacitor failure indication
- Temperature sensing feature with alarm in case of panel over heating
- Should have RS485 communication protocol ,PQ data Gateway PAS600 communication.

3. ENCLOSURE

The panel shall be indoor type, free standing, and floor mounting with IP42 degree of protection. It shall be completely made of CRCA sheet steel. The enclosure shall have sturdy support structure with angle supports as necessary and shall be finished with powder coating in the approved colour shade/s to match the colour of the other panels. The thickness of powder coating should be minimum 60-80 microns.

Suitable provisions shall be made in the panel for proper heat dissipation. Air aspiration louvers for heat dissipation shall be provided as necessary.

The front portion shall house the switchgear, and the rear portion shall house capacitors and series reactors. The enclosure is to be suitably sized to accommodate all the components, providing necessary air clearance between live and non-live parts, providing necessary working clearance. There should be compliance for the following:

IS16636/ IEC61921: Power capacitors–Low voltage power factor correction banks.

IEC 61439-1&II : Low-Voltage Switchgear and Control gear Assemblies - Part 1: Type- Tested and Partially Type-Tested Assemblies.

IEC 62208 : Empty enclosures for low-voltage switchgear and control gear assemblies – General requirements

IEC 61326-1 : Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements.

IEC 61000-6-4 : Electromagnetic compatibility – Generic standards – Emission standard for industrial environments.

4. SWITCHGEAR & PROTECTION

Incomer switchgear shall be TP&N breaker appropriate rating. Suitable contactor for each step shall be used and must be capable of capacitor switching duty at each step for short circuit protection.

Bus bars shall be suitably colour coded and must be mounted on appropriate insulator supports.

Power cables used shall have superior mechanical, electrical and thermal properties, and shall have the capability to continuously operate at very high temperatures up to 125 deg.C.

Internal wiring between main bus-bars, breaker, contactor and capacitors shall be made with 1100 V grade, PVC insulated, copper conductor cable of appropriate size, by using suitable copper crimping terminal ends etc.

Suitable bus links for input supply cable termination shall be provided.


5. CONTROL CIRCUIT & GENERAL PROTECTION

The control circuit shall be duly protected by using suitable rating MCB.

An emergency stop push button shall be provided to trip the entire system (22.5 mm dia, mushroom type, press to stop and turn to reset).

Wiring of the control circuit shall be done by using 1.5 sq.mm, 1100 V grade, PVC insulated, multi-stranded copper control wire.

Inspection terminal strip, number ferruling, labeling etc. shall be provided. 440 V caution board on the panel shall be provided.

SECTION-XI	FORMS	
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FORM-A**PROFORMA OF ANNUAL FINANCIAL TURNOVER FROM CHARTERED ACCOUNTANT**

Sr. No.	F.Y.	Turnover (in Rs.)
1	2021-22	
2	2022-23	
3	2023-24	
	Net Average Annual Turnover	

Signature of Chartered Accountant

Name of Chartered Accountant

Membership No. ICAI

Date and Seal

FORM-B

**PROFORMA OF PROFIT & LOSS STATEMENT FROM CHARTERED
ACCOUNTANT**

It is certified that M/s _____ have not incurred any loss
in more than two years during the last five years ending 31st March 2024

Signature of Chartered Accountant

Name of Chartered Accountant

Membership No. ICAI

Date and Seal

FORM-C

BANKERS CERTIFICATE FROM A SCHEDULED BANK

“This is to certify that to the best of our knowledge and information that M/s Sh. _____ having marginally noted address, as a customer of our bank are / is respectable and can be treated as good for any engagement upto a limit of Rs. _____ (Rupees _____)
This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

(Signature) for the Bank

NOTE:-

1. Bankers Certificates should be on letter head of the Bank, addressed to tendering authority.
2. In case of Partnership firm, certificate should include names of all partners as recorded with the Bank.

FORM-D

CERTIFICATE OF NET WORTH FROM CHARTERED ACCOUNT

“It is to certify that as per audited balance sheet and profit & loss account during the Financial year 2023-24, the Net worth of M/s _____ (Name& registered address of individual/ firm/ company), as on _____ (the relevant date) is Rs. _____ after considering all liabilities. It is further that Net worth of the company has not eroded by more than 30% in the last three years ending on (the relevant date)”.

Signature of Chartered Accountant

Name of Chartered Accountant

Membership No. ICAI

Date and Seal

FORM-E**CALCULATION OF BIDDING CAPACITY****DETAILS OF EXISTING COMMITMENTS AND ONGOING WORKS.**

S. No.	Name of work/ project and location	Owner or sponsoring organization	Contract value in crores of rupees	Date of commencement as per contract	Stipulated date of completion	Upto date percentage progress of work	Remaining work in percentage (100- column 7)	Existing commitment Column 4 x Column 8 /100	Name and address/ telephone number of officer to whom reference may be made	Remarks
1	2	3	4	5	6	7	8	9	10	11

Total (B) =

Maximum turnover in last seven years = Rs.....

Updated value of turnover (A) = Rs.....


No. of years (N) =

Bidding Capacity= {[AxNx1.5]-B} =

Certificate:

I certify that all the awarded and ongoing works have been included in the above list.

(Signature of Bidder(s))

SECTION-XI	LIST OF APPROVED MAKES AND SCHEDULE OF QUANTITIES (ELECTRICAL WORK)	
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S.No.	Details of equipment/ material	Make/Manufacturer
1	Hybrid (APFC+AHF) Panels	Hitachi/ TDK/ Schneider/ Siemens
2	ACB	Lauritz Knudsen (U-Power Omega)/ Siemens (3 WL)/ Schneider <i>EASYPACT MVS</i>) / ABB (Emax2)/Legrand (DMX3)
3	Capacitor Banks	Siemens / Schneider/ Hitachi/TDK
4	Current Transformer/ Potential Transformer	KAPPA/ECS /SCHNEIDER /PRAGATI
5	MCCB Microprocessor based / Thermo magnetic releases	Legrand(DPX3)/Schneider(Easypact CVS)/ABB(T-MAX)/ Lauritz Knudsen (D- Sine)/ Siemens VA/ Hager (H3+)
6	HT & LT Cables	KEI/ Havells/ Polycab
7	Cable Jointing/Termination Kit	Raychem/ <i>M-seal</i> / 3M
8	Glands and Lugs / Thimbles Long Barrel	Dowell's (Biller India)/Hax Brass (Copper Alloy India)/3D
Note:		
1. The contractor will use one of the approved makes as mentioned above with prior approval in writing from Engineer-in-charge. The technical submittal for the same shall be submitted for approval.		
2. In case of different quality / pattern of same make, the pattern/ quality shall be approved Engineer – in – charge.		
3. For materials/equipment/ to be used in items of work for which approved makes are not given herein above, the makes & models of such materials /equipment shall be as approved by Engineer –in-charge.		
4. The wiring connections to be made through terminal block & installation connectors.		
5-Panel must be OEM factory made and physical inspection is mandatory at manufacturing facility.		

Up-gradation/New hybrid (Passive + Active) Power Factor correction for 10 nos. 11kV Substations, PGIMER, Chandigarh.

SCHEDULE OF QUANTITY

S.No.	Description	Unit	Qty.	Rate	Amount
	Hybrid Power Factor Correction Panel				
	Design, Supply, Installation, Testing & commissioning of cubicle type Semi compartmentalized floor mounted free-standing type with separation system Hybrid APFC panel. Hybrid panel should have, 433V, 50HZ, 3 phase 4 wire/3 Wire supply. Active part should be modular and have modules of 50/100 A or mentioned in specs, AHF must be intrinsic design of voltage sourced IGBT based intelligent 3-Level topology with 12 IGBT's with Programmable Microprocessor Controller to maintain Power Factor, Harmonics & Unbalancing. The passive part must be as per IS: 16636:2017 or IEC 61921 & 61439 Part -I & II (OEM Factory made) with valid temperature rise test from CPRI/ASTA-ERDA. The passive part must be as per the duly housed in epoxy powder coated 2mm thick CRCA steel sheet semi compartmentalized enclosure free standing type with all supports, accessories, switch gears, capacitors, control gears, protections, wiring, interconnections, control MCBs, controllers, reactors, etc.				
	All Major components like Capacitor, Reactors, Controller, Capacitor Duty Contactor and AHF module should be of single manufacturer for better operation and maintenance practice. All capacitors should be ISI/BIS Marked with valid CML Number on each name plate. All detuned reactors shall be with CE marking and ROHS compatible, IEC-60529, Electromagnetic standard FCC 15J,Class-A IEC61000-4, ANSI IEEE Standard 519-2014 (Harmonics LIMITS) items like capacitors should have valid CPRI type tested as per the relevant IS. Hybrid Panel should be IP-42 and duly housed in epoxy powder coated 2mm thick CRCA sheet steel semi compartmentalized enclosure free standing type with all supports, accessories, switch gears, control gears, protections, wiring, interconnections, control MCBs and maintain PF,I-THD,V-THD as per IEEE 519-92 etc. as required. Also complete in all respects & having its main components as bellow along with all other standard components ,circuitry & specifications as required:				
	NOTE:1) CT,VT for power factor measurement source side also consider in all panels.				
1	Hybrid Power Factor Correction Panel AHF(300 Amp) + (APFC) 450 KVAR				
	<u>INCOMMER</u>				
	S.I.T.C of 1 No.of 1250 A 4P Electrically Operated Draw out (EDO) type ACB with Ics=Icu=Icw=50 KA having Microprocessor based releases for overload, S/C, O/C and earth fault protection.				
	1 No. of Display meter with compatible RS 485 ports.				
	3 No.of Phase Indicating & ON-OFF LED Lights 230 V.				
	1 Set. of Ammeter - digital 3 Phase.				
	6 No. of MCB 6A-SP-10kA-C-Curve.				
	<u>BUS BARS</u>				

S.No.	Description	Unit	Qty.	Rate	Amount
	1600-Amps (neutral equal size) 3 phase 4 wire 415 volts 50 HZ AL bus bars with colour coded PVC heat shrinkable sleeves.				
	<u>OUTGOING</u>				
	Active Part:				
	AHF 300 Amp - 1 Nos. Three Level Topology 12-IGBT based active technology with gate driver,interfacing,voltage sensing& control cards,heat sinks,cooling fan,current transducers,SMPS,SSR etc.) each have following.				
	9 Nos. of High-speed Semiconductor fuse				
	3 No of 100 Amp 3P4W AHF module (3 -Level Topology ,12 IGBT Circuit)				
	1 No. of Programmable HMI With 7inches LED Display.				
	Passive Part:				
	APFC 450Kvar-1Nos. The Solution should comprise of 450kVAR including Capacitor Duty Contactor, APFC relay & Detuned filter reactors 14% with 143% linearity. The capacitor bank should have the following step ratings:100X2+50X3+25X2+15X1+10X2+5X3 Capacitor shall be Gas impregnated Heavy Duty MPP type low loss with overcurrent capability of 1.8xIr and Inrush current capability of 400xIr.Each stage of the capacitor bank should have suitable overload and short circuit protection as defined below.				
	1 No APFC Relay with 3 CT sensing facilities.				
	Cap Bank -100KVAR - 2 Nos. (Each Consist)				
	1 No. 250A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 100 kvar Capacitor Unit.				
	4 No. of 33.1KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -50KVAR - 3 Nos. (Each Consist)				
	1 No. 125A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 50 kvar Capacitor Unit.				
	2 No. of 33.1KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -25KVAR - 2 Nos. (Each Consist)				
	1 No. 63A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 25 kvar Capacitor Unit.				
	1 No. of 33.1KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -15KVAR - 1 Nos. (Each Consist)				
	1 No. 32A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 15 kvar Capacitor Unit.				
	1 No. of 20KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -10KVAR - 2 Nos. (Each Consist)				
	1 No. 25A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 10 kvar Capacitor Unit.				
	1 No. of 12.5KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				

S.No.	Description	Unit	Qty.	Rate	Amount
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -5KVAR - 3 Nos. (Each Consist)				
	1 No. 16A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 7 kvar Capacitor Unit.				
	1 No. of 6.3KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	As Above	Set	2	2519200	5038400.00
2	Hybrid Power Factor Correction Panel AHF (250 Amp) + APFC (400 KVAR)				
	<u>INCOMMER</u>				
	S.I.T.C of 1 No. of 1250 A 4P Electrically Operated Draw out (EDO) type ACB with Ics=Icu=Icw=50 KA having Microprocessor based releases for overload, S/C, O/C and earth fault protection.				
	1 No. of Display meter with compatible RS 485 ports(MODBUS).				
	3 No. of Phase Indicating & ON-OFF LED Lights 230 V.				
	1 Set. of Ammeter - digital 3 Phase.				
	6 No. of MCB 6A-SP-10kA-C-Curve.				
	<u>BUS BARS</u>				
	1600-Amps (neutral equal size) 3 phase 4 wire 415 volts 50 HZ AL bus bars with colour coded PVC heat shrinkable sleeves.				
	<u>OUTGOING</u>				
	Active Part:				
	AHF 250 Amp - 1 Nos. Three Level Topology 12-IGBT based active technology with gate driver, interfacing, voltage sensing & control cards, heat sinks, cooling fan, current transducers, SMPS,SSR etc.) each have following.				
	9 Nos. of High speed Semiconductor fuse				
	2 Nos. of 100 Amp 3P4W AHF module (3 -Level Topology ,12 IGBT Circuit)				
	1 No. of 50 Amp 3P4W AHF module (3 -Level Topology ,12 IGBT Circuit)				
	1 No. of Programmable HMI With 7inches LED Display.				
	Passive Part:				
	APFC 400Kvar-1Nos. The Solution should comprise of 450kVAR including Capacitor Duty Contactor, APFC relay & Detuned filter reactors 14% with 143% linearity. The capacitor bank should have the following step ratings:100X2+50X2+25X2+15X1+10X2+5X3 Capacitor shall be Gas impregnated Heavy Duty MPP type low loss as per standards with overcurrent capability of 1.8xIr and Inrush current capability of 400xIr .Each stage of the capacitor bank should have suitable overload and short circuit protection as defined below.				
	1 No APFC Relay with 3 CT sensing facilities.				
	Cap Bank -100KVAR - 2 Nos. (Each Consist)				
	1 No. 250A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 100 kvar Capacitor Unit.				
	4 No. of 33.1KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				

S.No.	Description	Unit	Qty.	Rate	Amount
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -50KVAR - 2 Nos. (Each Consist)				
	1 No. 125A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 50 kvar Capacitor Unit.				
	2 No. of 33.1KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -25KVAR - 2 Nos. (Each Consist)				
	1 No. 63A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 25 kvar Capacitor Unit.				
	1 No. of 33.1KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -15KVAR - 1 Nos. (Each Consist)				
	1 No. 32A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 15 kvar Capacitor Unit.				
	1 No. of 20KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -10KVAR - 2 Nos. (Each Consist)				
	1 No. 25A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 10 kvar Capacitor Unit.				
	1 No. of 12.5KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -5KVAR - 3 Nos. (Each Consist)				
	1 No. 16A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 7 kvar Capacitor Unit.				
	1 No. of 6.3KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	As Above	Set	8	2075881	16607048.00
3	Hybrid Power Factor Correction Panel AHF (150 Amp) + APFC (250 KVAR)				
	<u>INCOMMER</u>				
	1No. 800A Amps. 415 Volts 4P Ics=Icu=Icw=50 KA Microprocessor Based Type ACB with overload, S/C, O/C and earth fault protection.				
	1 No. of Display meter with compatible RS 485 ports(MODBUS).				
	3 No. of Phase Indicating & ON-OFF LED Lights 230 V.				
	1 Set. of Ammeter - digital 3 Phase.				
	6 No. of MCB 6A-SP-10kA-C-Curve.				
	<u>BUS BARS</u>				
	1000-Amps (neutral equal size) 3 phase 4 wire 415 volts 50 HZ AL bus bars with colour coded PVC heat shrinkable sleeves.				

S.No.	Description	Unit	Qty.	Rate	Amount
	OUTGOING				
	Active Part:				
	AHF 150 Amp - 1 Nos. Three Level Topology 12-IGBT based active technology with gate driver, interfacing, voltage sensing & control cards, heat sinks, cooling fan, current transducers, SMPS, SSR etc.) each have following.				
	9 Nos. of High speed Semiconductor fuse built in protection.				
	1 No of 100 Amp 3P4W AHF module (3 -Level Topology ,12 IGBT Circuit)				
	1 No of 50 Amp 3P4W AHF module (3 -Level Topology ,12 IGBT Circuit)				
	1 No. of Programmable HMI With 7inches LED Display.				
	Passive Part:				
	APFC 250Kvar-1Nos. The Solution should comprise of 450kVAR including Capacitor Duty Contactor, APFC relay & Detuned filter reactors 14% with 143% linearity. The capacitor bank should have the following step ratings: 50X3+25X2+15X1+10X2+5X3 Capacitor shall be Gas impregnated Heavy Duty MPP type low loss as per standards with overcurrent capability of 1.8xIr and Inrush current capability of 400xIr .Each stage of the capacitor bank should have suitable overload and short circuit protection as defined below.				
	1 No APFC Relay with 3 CT sensing facilities.				
	Cap Bank -50KVAR - 3 Nos. (Each Consist)				
	1 No. 125A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 50 kvar Capacitor Unit.				
	2 No. of 33.1KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -25KVAR - 2 Nos. (Each Consist)				
	1 No. 63A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 25 kvar Capacitor Unit.				
	1 No. of 33.1KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -15KVAR - 1 Nos. (Each Consist)				
	1 No. 32A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 15 kvar Capacitor Unit.				
	1 No. of 20KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -10KVAR - 2 Nos. (Each Consist)				
	1 No. 25A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 10 kvar Capacitor Unit.				
	1 No. of 12.5KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -5KVAR - 3 Nos. (Each Consist)				
	1 No. 16A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 7 kvar Capacitor Unit.				
	1 No. of 6.3KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				

S.No.	Description	Unit	Qty.	Rate	Amount
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	As Above	Set	6	1313745	7882470.00
4	Hybrid Power Factor Correction Panel AHF (150 Amp) + APFC (200 KVAR)				
	<u>INCOMMER</u>				
	1 No. of 630A Amps. 415 Volts 4P Microprocessor Based Type ACB of 50KA with overload, S/C, O/C and earth fault protection.				
	1 No. of Display meter with compatible RS 485 ports.				
	3 No. of Phase Indicating & ON-OFF LED Lights 230 V.				
	1 Set. of Ammeter - digital 3 Phase.				
	6 No. of MCB 6A-SP-10kA-C-Curve.				
	<u>BUS BARS</u>				
	800-Amps (neutral equal size) 3 phase 4 wire 415 volts 50 HZ AL bus bars with colour coded PVC heat shrinkable sleeves.				
	<u>OUTGOING</u>				
	Active Part:				
	AHF 150 Amp - 1 Nos. Three Level Topology 12-IGBT based active technology with gate driver, interfacing, voltage sensing & control cards, heat sinks, cooling fan, current transducers, SMPS, SSR etc.) each have following.				
	9 Nos. of High speed Semiconductor fuse built in protection.				
	1 No of 100 Amp 3P4W AHF module (3 -Level Topology ,12 IGBT Circuit)				
	1 No of 50 Amp 3P4W AHF module (3 -Level Topology ,12 IGBT Circuit)				
	1 No. of Programmable HMI With 7inches LED Display.				
	Passive Part:				
	APFC 200Kvar-1Nos. The Solution should comprise of 450kVAr including Capacitor Duty Contactor, APFC relay & Detuned filter reactors 14% with 143% linearity. The capacitor bank should have the following step ratings: 50X2+25X2+15X1+10X2+5X3 Capacitor shall be Gas impregnated Heavy Duty MPP type low loss as per standards with overcurrent capability of 1.8xIr and Inrush current capability of 400xIr .Each stage of the capacitor bank should have suitable overload and short circuit protection as defined below.				
	1 No APFC Relay with 3 CT sensing facilities.				
	Cap Bank -50KVAR - 2 Nos. (Each Consist)				
	1 No. 125A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 50 kvar Capacitor Unit.				
	2 No. of 33.1KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -25KVAR - 2 Nos. (Each Consist)				
	1 No. 63A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 25 kvar Capacitor Unit.				
	1 No. of 33.1KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -15KVAR - 1 Nos. (Each Consist)				
	1 No. 32A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 15 kvar Capacitor Unit.				

S.No.	Description	Unit	Qty.	Rate	Amount
	1 No. of 20KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -10KVAR - 2 Nos. (Each Consist)				
	1 No. 25A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 10 kvar Capacitor Unit.				
	1 No. of 12.5KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	Cap Bank -5KVAR - 3 Nos. (Each Consist)				
	1 No. 16A 3P MCCB 25 KA with built in protection				
	1 No. Capacitor Duty Contactor for 7 kvar Capacitor Unit.				
	1 No. of 6.3KVAR MPP-H capacitor at 525 V AC with 14% AL wound Detuned Reactor.				
	1 Set of start/stop PB & On/OFF LED, A/M S.S				
	As Above	Set	6	1206103	7236618.00
5	Supplying of following size of XLPE insulated , PVC sheathed cable of 1.1 kV grade , aluminium conductor, flat steel strip armoured, conforming to IS: 7098 (Part 2) with upto date amendment complete as required.				
i	3.5C X 400 sq. mm	Mtr.	1000	2323	2323000.00
6	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct as required.				
i	Above 185 sq. mm and upto 400 sq. mm	Mtr.	700	115	80500.00
7	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
i	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	Mtr.	200	185	37000.00
8	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 kV grade as required.				
i	3.5C X 400 sq. mm	Nos	66	1556	102696.00
	LT 1.1 kV CONTROL CABLES				
9	Supplying of following sizes of 1.1 kV grade PVC insulated copper conductor armoured stranded Control Cable conforming to IS :1554 complete as required and as per specifications.				
i	6 core, 2.5 Sq.mm. Cu. Conductor cable	Mtr	700	295	206500.00
10	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
i	Upto 35 sq. mm (clamped with 1mm thick saddle)	Mtr.	600	45	27000.00
11	Supplying and making end termination with double brass compression gland and Copper lugs for following size of PVC sheathed copper conductor armoured control cable of 1.1 kV grand as required.				
i	6 C x 2.5 Sq.mm.	Nos	44	278	12232.00
12	Supply , Installation, Testing and commissioning of following rating Acb's in the spare compartment of existing LT Panels at various locations including fabrication, connection with solid bus bar, etc. as required				

S.No.	Description	Unit	Qty.	Rate	Amount
	2 -Nos. ACB, EDO Type 1250 Amps, 50 kA, 4 Pole, Microprocessor Based. SITC of Indicator RYB, On, Off, trip, current transformer, CT shorting Terminals, MCB, Neutral Link, Auxiliary Contractor, Terminal Blocks, Wiring for feeder, Busbar Link,etc. as required at site.				
	4-Nos. of 800A 4P ACB with Ics=Icu=Icw 50KA having Microprocessor based releases for O/L, S/C & E/F. SITC of Indicator RYB, On, Off, trip, current transformer, CT shorting Terminals, MCB, Neutral Link, Auxiliary Contractor, TerminalBlocks, Wiring for feeder, Busbar Link,etc. as required at site.				
	Each ACB shall have one set of the following items:				
	Intelligent multi-function digital meter Datalog (8 MB),Analog I/O, digital I/O variants available, Meter with Ethernet port available Parameters: V, A, F, kW, KVA, kVAr, kWh, kVAh, kVArh, PF, Runhr, Onhr, Interrupts, Phase angle, THD, Neutral current, Max Demand (with RTC), Events (high-low) with time stamp, Individual Harmonics upto 31st.				
	All ACBs shall have Icu=Ics=Icw for 1.0 secs for all ACBs				
	1 Set Indication Lamps, LED type, for RYB with 2 Amp control MCB.& breaker 'ON', 'OFF', 'TRIP' & spring charged lamps with 2 Amp MCB for controlling along with SITC of TNC switch.				
	As Above upto the entire satisfaction of Engineer-in -Charge	Set	1	1081785	1081785.00
13	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with charcoal/ coke and salt as required.	Set	44	13838	608872.00
14	Supplying and laying 25 mm X 5 mm copper strip at 0.50 meter below ground as strip earth electrode, including connection / terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	Mtr	815	853	695195.00
	Sub Total-A				41939316.00
	Add GST @6.33%				2654758.70
	Total				44594074.70
15	Less Rebate on following materials after de-termination & dismantling from existing panel including transportation from PGI.				
i	500KVAR APFC Panel at ACC SS & ATC SS	Nos	4	60000	240000.00
ii	480KVAR APFC Panel at NHE SS	Nos	2	57600	115200.00
iii	250 KVAR APFC Panel at APC SS & AEC SS	Nos	2	30000	60000.00
iv	175 KVAR APFC Panel at Emergency SS	Nos	2	21000	42000.00
v	150 KVAR APFC Panel at MDH SS	Nos	2	18000	36000.00
	Sub Total-B				493200.00
	Grand Total (A-B)				44100874.70

NOTE:

- 1 This is a percentage rate tender, therefore, percentage is only to be quoted by the agency in figures on the amount mentioned in Schedule of quantity.
- 2 The percentage quoted should be inclusive of all taxes including GST etc. and nothing extra shall be payable on this account.
- 3 The *hybrid (Passive + Active) Power Factor correction* shall be got installed from the OEM / Channel partner of the OEM and commissioning report of the same shall be submitted by contractor after installation of the same.

