

E-Tender No.: PEDA/2016-17/28

BIDDING DOCUMENT

For

**DESIGN, ENGINEERING, SUPPLY, INSTALLATION
AND COMMISSIONING OF 1000 NOS. SOLAR
POWER PACKS HAVING 300W_p CAPACITY EACH
INCLUDING WARRANTY & MAINTENANCE FOR 5
YEARS WITH BATTERY BACKUP IN THE STATE OF
PUNJAB (INDIA)**



**PUNJAB ENERGY DEVELOPMENT AGENCY
SOLAR PASSIVE COMPLEX
Plot no. 1&2 Sector 33-D
CHANDIGARH 160 022, INDIA**

**TELEPHONES: (91) 0172 - 2663382, 2667007 FAX: (91) 0172 – 2662865
Website : <http://peda.gov.in>**

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SECTION - I

INVITATION FOR BIDS



Punjab Energy Development Agency

Ph.: 0172-2663328, 2663382 Fax : 0172-2662865

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E-TENDER NOTICE NO. PEDA/2016-17/28

Punjab Energy Development Agency (PEDA), invites e-tender for the Design, Engineering, Supply, Installation, Commissioning and testing of 1000 Nos. Solar Power Packs having 300Wp capacity each as under:

| | | |
|---|---|-------------------------|
| i) System Cost - To be quoted by the bidder | i) Sale of Tender Document (online) - | 28.03.2017 |
| ii) Earnest Money - Rs. 9,00,000/- | ii) Receipt of E-tender – | 10.04.2017 upto 1:00 PM |
| iii) Processing fee - Rs. 2,300/- | iii) Date & Time of opening of E-Tender - | 10.04.2017 at 4:00 PM |
| iv) Tender Form - Rs. 5,000/- | | |

For participating in the e-tendering process, the Supplier shall have to get themselves registered with **etender.punjabgovt.gov.in** and get user ID, Password. Class-3 Digital Signature is mandatory to participate in the e-tendering process. For any clarification/difficulty regarding e-tendering process flow, please Contact PEDA or 0172-2663328, 2663382, 2667007 or 0172-3934667, 92572-09340, 80546-28821.

CONDITIONS:

1. Corrigendum / Addendum / Corrections, if any will be published on the website.
2. If the date of opening of tenders happens to be a holiday then the tenders will be opened on the next working day.
3. PEDA reserves the right to accept/reject any or all tenders without assigning any reasons.

Executive Director

SCOPE OF WORK

Design, Engineering, Supply, Installation, Commissioning and testing of 1000 Nos. Solar Power Packs having 300Wp capacity each including warranty & maintenance for 5 years with Battery Backup in the State of Punjab (India).

1. Bids must be submitted through e-tender. The e-tendering will remain open till 10.04.2017 at 04.00PM. All bids must be accompanied by Earnest Money Deposit of Rs.9.00 lacs. Bids will be opened in the presence of bidders representative who choose to attend at the address below at 4.00 PM on 10.04.2017 The details are given below:

- | | | | |
|-----|--|---|--|
| (a) | Name of office | : | Punjab Energy Development Agency |
| (b) | Technical Head | : | Executive Director, PEDDA. |
| (c) | Postal Address | : | Plot no. 1 & 2 Sector 33D, Chandigarh 160022, India |
| (d) | Telephone nos. | : | (91)0172 - 2667007, 2663328, 2663382 |
| (e) | Fax No. | : | (91) 0172 – 2662865 |
| | Tele FAX | | |
| (f) | Date of commencement of sale of bidding document | : | 28.03.2017 |
| (g) | Last date & time for receipt of bids | : | 10.04.2017 upto 1:00 PM |
| (h) | Time and date of opening of technical of Bids | : | 10.04.2017 at 4:00 PM |
| (i) | Concerned officer | : | Jaspal Singh, AGM (SPV) (91)0172– 2667007 |

- 4 **The bidding shall be in Single Bid System having two parts pattern. Technical Bid and Financial Bid** : Technical bid will contain the qualifying requirement and the Financial offer will contain the offered prices.

SECTION - II

INSTRUCTIONS TO BIDDERS

FOR SOLAR POWER PACKS

CAPACITY: 300W_p

A. COMPLETE INTRODUCTION

1. **Source of Funds**

- 1.1 The Project has been funded by MNRE, GOI and Punjab Govt.
- 1.2 Executing Agency, PEDDA
- 1.3 The general scope under this contract is concept to supply, installation and commissioning of 1000 Nos. Solar Power Packs capacity 300 Wp each Rooftop Grid Interactive with Battery Backup in the state of Punjab. Covering engineering design, manufacture, shop testing, inspection, packing & forwarding, transportation upto end user, site loading & unloading, storage in safe custody, erection, carrying out preliminary tests at site, commissioning, performance testing & handing over to the purchaser/ end user all the equipment installed including the insurance coverage for the concept to commissioning period including maintenance for 5 years from the actual date of commissioning.

2. **Eligible Bidders**

- 2.1 This invitation for bids is open to all eligible Manufacturers or their authorized supplier *or system integrator or Channel partner* of MNRE who otherwise have not been debarred/blacklisted by any Govt. Deptt.'s / organization/ PSU's / institutions/ agencies/ autonomous Organizations. In this connection the bidders shall be required to submit a self authorized certificate on non judicial stamp paper of Rs.100/-. *If the bidder will be provided the false information regarding debarred / blacklisted, thus the contract will be cancelled and EMD/ Performance Bank Guarantee or both shall be forfeited.*
- 2.2 Bidders should have sufficient experience of design, manufacturing, supplying, installing, commissioning and maintaining at least SPV Power Plants of aggregate capacity 100KWp or SPV Devices like solar street lights and 200 solar power packs etc in last three years upto the last date of bidding and is in successful operation in India. Bidder is required to submit the proof of their eligibility in the shape of work order, commissioning certificate from the client, satisfactory operation reports copies and establishment details along with the tender bid in its technical bid.
- 2.3 If bidder is authorized supplier, submit the certificate as per Annexure 7 from their principal.
- 2.4 Minimum Annual Turnover of the bidder should be Rs. 1.5 crore for each financial year for last three financial years.
- 2.5 The company must be in profit for last two financial years or the net worth of bidders shall be more than Rs. 1.00 Crore per year for last three financial years.

3. **Bid Form**

- 3.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the Bidding Documents, indicating the goods to be supplied, a brief description of the goods, quantity and quality standards.

3.2 The rate of the power packs should be quoted inclusive of design, supply, installation, commissioning, testing, all taxes / duties, transportation, insurance and any other charges required to complete the projects as per scope of work.

4. Documents Establishing Bidder's Eligibility and Qualifications

4.1 The Bidder shall furnish, as part of its technical bid, documents establishing the bidder's eligibility to bid and its qualifications to perform the Contract.

5. The documentary evidence of the Bidder's qualifications to perform the Contract if its bid is accepted, shall establish to the Purchaser's satisfaction.

- (a) that, in the case of a Bidder offering to supply goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized by the goods' manufacturer or producer to supply the goods in the Purchaser's country. In support party will provide the documentary proof of infrastructure support for the same.
- (b) that the Bidder has the financial, technical, and production capability necessary to perform the Contract

6. The documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings and data, and shall consist of:

- (a) a detailed description of the essential technical and performance characteristics of the goods;
- (b) a list giving full particulars, including available sources of all spare parts, special tools, etc., necessary for the proper and continued functioning of the goods for a period to be specified in the Bid; and
- (c) a item-by-item commentary on the Purchaser's Technical Specifications demonstrating the goods and services to those specification, or a statement of deviations and exceptions to the provisions of the Technical Specifications.

7. Earnest Money Deposit

7.1 Earnest Money Deposit (EMD) of Rs. 9.00 lacs (Rs. Nine Lacs Only) deposited through IPG mode (Internet Payment Gateway)

7.2 Unsuccessful Bidder's EMD will be discharged/ returned as promptly as possible within thirty (30) days after the issuance of work order to successful bidder.

7.3 The successful Bidder's EMD will be discharged after signing the Contract agreement and furnishing the performance security.

The bid security may be forfeited:

- a) if a Bidder :
 - (i) withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form

- b) in case of a successful Bidder, if the Bidder fails:
 - (i) to sign the Contract within the specified period.
 - (ii) to furnish required performance security.
- 7.4 No Interest shall be payable on the amount of earnest money and the same will be released, after the tenders have been decided, to those Bidders who fail to get the contract.
- 7.5 The Tender security (earnest money) may be forfeited:
 - a) If a Tender withdraws its tender during the period of tender validity specified by the Bidder in the tender.
 - b) If the successful Bidder fails to sign the contract within stipulated period.

8. Period of Validity of Bids

- 8.1 Bids shall remain valid for the period of 90 days from the date of opening of bids.

9. Format and Signing of Bid

- 9.1 The Bidder shall submit complete bid through e-tender at website [etender.punjabgovt.gov.in.](http://etender.punjabgovt.gov.in), Department : Punjab Energy Development Agency.

10. Submission of Bids

10.1 Preparation of Bids:

- a. The bidder shall upload the bids as per formats on or before the date and time notified in this document/ NIT.
- b. single Bid System shall be followed and Bids shall be prepared in two parts.

Part – I Technical Bid

Part – II Price Bid.

- c. It should be clearly noted that Part –I should not contain any price bid.
- d. Part-I containing technical bid will be opened at the time & date notified for opening. If any bidder indicates the price in Part-I, the bid would stand rejected. Bids not accompanied by Earnest Money Deposit will be rejected.

Part II containing Prices will not be opened at the time of opening Part-I. Price bid of only technically qualified bidders will be opened on that date and time. Date and time of Price bid opening will be uploaded on web site and will also be intimated to qualified bidder by suitable means.

10. Submission of Bid

The Bidder shall submit complete bid through e-tender at website [etender.punjabgovt.gov.in.](http://etender.punjabgovt.gov.in)

11. Deadline for Submission of Bids

- 11.1 Bids must be submitted through e-tendering process on time and date as mentioned in NIT

12. Late Bids

- 12.1 The E-tendering system will not be accept any bid after the deadline for submission of bids as mentioned in NIT.

BID OPENING AND EVALUATION

13. Opening of Technical Bids by Purchaser

- 13.1 The Purchaser will open the technical E-bids in the presence of Bidders representatives who choose to attend, at the time, on the date, and at the place specified in DNIT. The bidder's representative who will be present shall sign a register evidencing their attendance.
- 13.2 The technical bids shall be evaluated by the purchaser for assessing bid responsiveness in line with the requirements mentioned in the DNIT
- 13.3 The bidders whose technical bids are declared as technically qualified shall be informed accordingly and their Price Bids shall be opened.

14. Clarification of Bids

- 14.1 During evaluation of the bids, the Purchaser may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.

15. Evaluation and Comparison of Bids

- 15.1 The Purchaser will evaluate and compare bids which have been determined to be substantially responsive.
- 15.2 The detailed techno-commercial analysis of the bid shall be carried out by the purchaser.

16. Contacting the Purchaser

- 16.1 From the time of bid opening to the time of contract award, if any bidder wishes to contact the purchaser on any matter related to the bid, it should do so in writing.
- 16.2 Any effort by a Bidder to influence the Purchaser in its decision on bid evaluation, bid comparison or contract award decisions may result in rejection of the Bidder's bid.

AWARD OF CONTRACT

17. Award Criteria

- 17.1 The Purchaser will award the Contract to the successful Bidder whose bid has been determined to be the lowest evaluated bid. For L1 the lowest rates shall be evaluated with Annual Maintenance charges (AMC) for 5 years.
- 17.2 Annual Maintenance charges should be quoted minimum 10% of the basic price of column 4 & 6 under Serial No. A of Price Bid format.

18. Purchaser's Right to Accept Any Bid and to Reject Any or All Bids

18.1 However, the Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders.

19. Signing of Contract

19.1 At the time as the Purchaser notifies the successful Bidder that its bid has been accepted, the Purchaser will send to the Bidder the work order and the Contract Form provided in the Bidding Documents, incorporating all agreements between the parties.

19.2 Within seven (7) days from the date of issue of work order, the successful Bidder shall sign the Contract and return it to the Purchaser. The signing of the work order cum contract agreement shall evidence the final acceptance of all terms and conditions and their due compliance by the successful bidder.

20. Performance Security

20.1 Within seven (7) days from the issue of work order, the successful bidder shall furnish to the Purchaser the performance security amounting to 10% value of the contract valid through out the execution of the contract and further upto six months from the date of commissioning of the projects specified in DNIT.

20.2 Failure of the successful Bidder to comply with the requirement of Clause 20.1 within the stated time periods shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Purchaser may make the award to the next lowest evaluated bidder or call for new bids.

20.3. The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

20.4 The Performance Security shall be denominated in the currency of the Contract, and shall be in one of the following forms:

- a. A Bank guarantee, issued by a Nationalized/ Commercial bank located in the purchaser's country, acceptable to the Purchaser, in the form provided in the Bidding Documents or another form acceptable to the Purchaser; or
- b. Demand Draft favouring PEDDA, payable at Chandigarh

21. Amendment of Bidding Documents:

21.1 At any time prior to the deadline for submission of bids, the purchaser may, for any reason, whether at its own initiative or in response to a clarification required by a prospective Bidder, modify the Bidding Documents by amendment.

- 21.2 The amendment will be notified in writing or fax to all prospective Bidders who have purchased and received the Bidding Documents and will be binding on them.
- 21.3 In order to afford prospective Bidders reasonable time in which to take the amendment into account in preparing their bids, the purchaser may, at its discretion, extend the deadline for the submission of bids
22. PEDDA reserves the right at the time of awarding the contract to increase or decrease the quantity of goods and locations of supply without any change in price or other terms and conditions.
23. Material shall be strictly as per the DNIT specifications, terms and conditions. If there is any left out specifications, in the DNIT the same shall be considered as per the latest MNRE specifications, guidelines and terms & conditions.
24. The offers shall be accompanied by the sample of the product with latest valid test certificates and reports from approved testing centers of the MNRE, Government of India. Offer received without sample and valid test certificates and reports shall not be accepted

SECTION - III

**GENERAL CONDITIONS OF
CONTRACT**

1. Packing

- 1.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

2. Incidental Services

- 2.1 The supplier may be required to provide any or all of the following compulsory services
- (a) Performance or supervision of the on-site assembly and/or start-up of the supplied Goods;
 - (b) Furnishing of tools required for assembly and/or maintenance of the supplied Goods;
 - (c) Furnishing of detailed operations and maintenance manual for each appropriate unit of supplied Goods;
 - (d) Performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
 - (e) Training of the Purchaser's Personnel, at the Supplier's plant and/or on site, in assembly, start-up, operation, maintenance and/or repair of the supplied Goods.

1. PAYMENT

Payment Terms:

Payment shall be made in Indian currency in the following manner:

- (i) Mobilization Advance Payment : Fifteen (15) percent of the contract price (except maintenance charges) shall be paid within thirty (30) days of signing of the contract and upon submission of claim and a bank guarantee of 110% amount valid for six months or till the time the mobilization advance is adjusted.
- (ii) On delivery and commissioning: Ninety (90) percent of the contract price (except maintenance charges) shall be paid within 30 days of the receipt of the goods at project sites and upon submission of the joint verification report and technically & commercial clear bills (complete assignment for each site will be considered for payment release). The 15% mobilization advance released will be adjusted in this payment released and relevant bank guarantee will be released on completion of adjustment of entire advance released.

- (iii) Balance Ten (10) percent of the contract price shall be released after satisfactory working of the systems under warranty period of 5 years from the actual date of commissioning of the project. However this amount can be released against bank guarantee of equal amount valid for five years from the date of completion of the project.
- (iv) Annual Maintenance charges shall be released on yearly basis after satisfactory performance report from the user agency/ PEDDA. The annual maintenance and repair cost shall be paid in equal yearly installments within thirty days of receipt of claim at the end of each year, after completion of maintenance obligations of the year, at the rates quoted in the price schedule

4. Subcontracts

- 4.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in his bid. Such notification, in his original bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.

5. Delays in the Supplier's Performance

- 5.1 Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Purchaser in its Schedule of Requirements.
- 5.2 The firm shall carry out the supply order and carry out its obligations under the contract with due diligence, efficiency and economy in accordance with generally accepted norms techniques and practices used in the industry through qualified/licensed manpowers. The Bidder shall also adhere to professional implementation and support services during the execution of the project. The PEDDA may carry out benchmarking of sample equipments to be provided by the short listed Firm before and / or immediately after the delivery of equipment.

It shall employ appropriate advanced technology and safe and effective equipment, machinery, material and methods. Bidder shall always act in respect of any matter relating to this contract, as faithful advisors to the PEDDA and shall, at all times, support and safeguard the PEDDA's legitimate interests in any dealings with the third party.

6. Penalty for delayed Performance (Goods and services)

- 6.1 Failure to complete work order in time shall attract penalty @0.5% of the delayed goods for every week of delay or part thereof subject to a maximum of 10% value of delayed goods and services including project commissioning. However on reaching of Maximum penalty the work order cum contract agreement may be cancelled and performance security may also be forfeited by PEDDA.

6.2 Relaxation in completion period for the purpose of penalty can be allowed if the delay is beyond the control of contractor or due to force majeure conditions. The proper documentation establishing the reasons for delay in this regard will be required to be given by the supplier to PEDDA. The decision in this regard shall be given by Chief Executive, PEDDA.

7. Inspection and tests and approval:-

Inspection and tests prior to shipment of Goods and at final acceptance are as follows:

- 7.1 The inspection of the Goods shall be carried out to check whether the goods are in conformity with the technical specifications mentioned in the DNIT and specified in the purchase order and shall be in the line with the inspection/test procedures laid down in the schedule of specifications and the contract conditions.
- 7.2 Manufacturer will provide suitable facilities at their works/ inspection site for carrying out various performance tests on the equipment
- 7.3 The purchaser shall have the right at all reasonable time to inspect the stage manufacturing at the manufacturer's premises.
- 7.4 Supplier's drawings shall be duly approved by the purchaser and deviation from these drawings will not be allowed
- 7.5 The supplier shall provide, within the time stated in the contract or in the programme, drawings showing details of the plant designing and any other information required for
- (a) Preparing suitable foundations or other means of support.
- (b) Providing suitable access on the site for the plant and any necessary equipment.
- (c) Making necessary electrical connections for the plant
- 7.6 Before the goods and equipment are taken over by the purchaser, the supplier shall supply operation and maintenance manuals along with each system together with drawings of the goods and equipment as built. These shall be in such details as will enable the purchaser to operate, maintain, adjust and repair all parts of the works as stated in the specifications. The manuals and drawings shall be in the ruling language (English) and in such form and numbers as stated in the contract. Unless and otherwise agreed, the goods and equipment shall not be considered to be completed for the purposes of taking over until such manuals and drawings have been supplied to the purchaser.
- 7.7 In case of the Supplier, supplying critical equipment which is being manufactured by a Foreign sub-contractor or vendor, mandatory inspection at works of Foreign sub-contractor or vendor shall be carried out by purchasers minimum two representatives. The complete charges for such inspection & tests including equipment simulation at the works of the sub-contractors including to & fro airfare, stay, boarding & lodging for purchasers engineers shall be borne by the supplier.
- 7.8 In case of indigenous equipment/goods inspection shall be carried out at the works

of the supplier by the purchasers engineer and the costs including to & fro airfare, stay, boarding & lodging for such inspection have to be borne by the supplier.

- 7.9 If the goods/services or any section fails to pass the Tests. The supplier may require such tests to be repeated on the same terms and conditions. All costs to which the purchaser may be put to by the repetition of the tests under this sub-clause shall be deducted from the contract price.
- 7.10 If the purchaser and the supplier disagree on the interpretation of the test results each shall give a statement of his views to the other within 14 days after such disagreement arises. The statement shall be accompanied by all relevant evidence. The purchaser will review both the statements and render a final decision within a further period of fourteen days which shall be binding on the supplier.

For the System & Other Software, the following will apply:

The Supplier shall provide complete and legal documentation of hardware, all subsystems, operating systems, compiler, system software and the other software. The Supplier shall also provide licensed software for all software products, along with the software manuals whether developed by it or acquired from others. The supplier shall also indemnify the purchaser against any levies/penalties on account of any default in this regard.

8. Acceptance Certificates:

- 8.1 On successful completion of acceptability test, receipt of deliverables etc, and after the purchaser is satisfied with the working on the plant, the acceptance certificate signed by the supplier and the representative of the purchaser will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the systems.
- 8.2 The training shall be conducted on the dates mutually agreed upon and within two months from the date of acceptance of supply.

9. Spare Parts

Supplier shall supply sufficient inventories to assure ex-stock supply of consumable spares such as Switches, fuses, indicating lamps & blocking diodes, battery spares etc. Four set of critical spares like PLC cards, IGBT driver cards, MoVs etc. shall be kept as minimum inventory level for the PCUs at service centre during the warranty and maintenance period.

10. Maintenance Service

- 10.1 Maintenance services shall be the part of Maintenance (AMC) activity and shall be provided by the supplier during the five year period of warranty and maintenance. The repairs of the entire system including supply of spares etc. for 60 months will be done by the supplier.
- 10.2 The maximum response time for a maintenance complaint from any of the

destination specified in the schedule of requirements (i.e. time required for supplier maintenance engineers to report after a request call/telegram/fax is made or letter is written) shall not exceed 72 hours.

- 10.3 It is expected that the average downtime of an item will be less than half the maximum downtime (i.e. defined as number of days for which an item of equipment is not usable because of inability of the supplier to repair it) as mentioned by the bidder in the form of technical details. In case an item is not usable beyond the stipulated maximum downtime the supplier will be required to arrange for an immediate replacement of the same till it is repaired. Detailed cost of items will be provided by the manufacturer.
- 10.4 During the maintenance period of five years of the power packs, if there is any loss or non functional of any component/ equipments of the power packs due to miss management/ mishandling or due to any other reasons (relate with the maintenance), what so ever, the supplier/ firm shall be responsible for immediately replacement/ rectification. The default component/ components shall have to be replaced by the supplier with new one without any extra cost.
- 10.5 The company will also be responsible to maintain the charge level/ VPC of battery upto the required level to fed the load as shown in schematic diagram. An emergency AC input for battery charging facility in worst weather conditions has been provided in the design of Power Conditioning Unit.
- 10.6 In case of battery during the applicable warranty of 5 years, in case of battery becomes defective due to any reason or improper charging, discharging, poor maintenance services, battery will be required to be replaced by the supplier free of cost with new battery of the same capacity, Make and type.
- 10.7 Penalty for non performance and maintenance services:**
During the maintenance period of five years of the power packs, if they becomes non operational due to any fault in the systems including SPV Panels, Batteries, PCU & BOS it shall be attended & rectified at site within three days from the date of receipt of complaint. Failure to rectify the non functional power pack/ packs within five days from the receipt of complaint, PEDAs reserves the right to levy penalty for non-performance @5% of value 10% security amount for every week, till 2 weeks. This penalty shall be deducted from balance 10% payment of security amount. After 2 weeks the defective / non functional power pack shall be rectified on the risk and cost of the supplier without any further notice. If the supplier received the balance 10% payment against equal amount of bank guarantee, the PEDAs has right to forfeit the entire amount of bank guarantee, after deduction of penalty, the balance payment shall be released after completion of 5 years period.

11. Right to use defective equipment

If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the equipment proves to be unsatisfactory, the

Purchaser shall have the right to continue to operate or use such equipment until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.

12. **Standards:**

The Goods supplied under this contract shall conform to the standards mentioned in the technical specifications and other sections of DNIT and when no applicable standard is mentioned then to the latest authoritative standard issued by the concerned institution appropriate to the goods, country of origin, MNRE as applicable.

13. **Insurance:**

The goods supplied under the contract shall be fully insured against loss or damage incidental to manufacture of acquisition, transportation, storage at site and delivery to site during the construction period by the supplier at his own cost.

14. **Transportation:**

Supplier shall be responsible for delivering all the equipment at site under his own arrangement within the stipulated time frame.

15. **Warranty:**

- The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that the goods supplied under this contract shall have no defect arising from design, materials or workmanship (except in so far as from design or materials is required by the purchaser specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in these conditions obtaining in the country of final destination. The supplier shall guarantee that the goods supplied shall perform satisfactorily as pre design rated/ installed capacity as provided for in the contract.
- This warranty shall remain valid for 5 years after the goods have been delivered and commissioned at the final destination. The actual commissioning date will be taken from the issuance of acceptance certificate as mentioned in DNIT.
- During the warranty period of five years of the power packs, if there is any loss or defect arising due to warranty obligation of any components/ equipments of the power packs or due to any other reasons, what so ever, (relate with maintenance) the supplier/ firm shall be responsible for immediately replacement/ rectification of the damaged/ defective component/ equipments. The default or damaged components/ equipments shall have to be replaced by the supplier with new one without any extra cost.

Penalty for non performance of warranty obligation:

- During the warranty period of five years of the power packs, if they becomes non-operational due to any loss or rising defects in any equipments/ components, the defective or damaged components/ equipments shall have to be replaced within five days from the date of receipt of complaint. Failing to replace the defective or damaged components/ equipments of the power plants within five days from the receipt of complaint, PEDDA reserves the right to levy penalty for non-performance @ 5% of 10% security amount for every week, till 2 weeks. This penalty shall be deducted from balance 10% payment of security amount. After 2 weeks the default or damaged component / equipments shall be replaced on the risk and cost of the supplier without any further notice. If the supplier received the balance 10% payment against equal amount of bank guarantee, the PEDDA reserve the rights to forfeited the entire amount of bank guarantee, after deduction of penalty, the balance payment shall be released after completion of 5 years period.

16. Suspension:

- a. PEDDA may by a written notice of suspension to the Firm, suspend all payments to the Firm under the contract, if the Firm fails to perform any of its obligations under this contract provided that such notice of suspension:
 - i. Shall specify the nature of the failure.
 - ii. Shall request the bidder to remedy such failure within a specified period from the date of receipt of such notice of suspension by the bidder.

17. Compliance to regulations and bye laws:

The contractor shall conform to the provisions of any statute relating to his workers and the work and regulations and bye-laws of any local authority and or any Central/State Deptt. or undertaking in whose jurisdiction the work connected .

18. Compensation under Workmen's Compensation Act:

The contractor shall be responsible for and shall pay any compensation to his workmen payable under the Workmen's Compensation Act,1923 (VIII of 1923) or any other act applicable hereinafter called the said Act for injuries caused to the workmen. The contractor will take a policy with an Insurance Company to cover all his workers against injuries fatal/non-fatal during course of duty against Workmen's Compensation Act. The contractor shall submit a copy of the same before start of the work so that PGL is kept free from any liability.

19. Other Conditions:

- a. Risk purchase at the cost of bidder will be made on the failure of the bidder to make supply as per Terms and Conditions. The difference of excess in cost thus

incurred will be received from the bidder in a suitable manner and even from his pending bills, earnest money or security whichever is available.

- b. If the contractor or his work people, or servants shall break, deface, injure or destroy any part of a building or existing equipments , the contractor shall make the same good at his own expense

20 Taxes and Duties:

- 20.1 A foreign supplier shall be entirely responsible for all taxes, stamp duties, licence fees, and other such levies imposed inside or / and outside the purchaser's country.
- 20.2 A local supplier shall be entirely responsible for all taxes, duties licence fees etc. incurred until delivery and commissioning of the contracted goods to the purchaser. ***All taxes payable as per Government Income tax & service tax norms will be payable by the bidder. TDS will be deducted from the payment of the Bidder as per the prevalent Laws and rules of Government of India and the State Government.***

21 Income/ Corporate Taxes in India:

- 21.1 The supplier shall be liable to pay all corporate taxes and income tax that shall be levied according to the laws and regulations applicable from time to time in India and the price bid by the supplier shall include all such taxes in the contract price.
- 21.2 Wherever the laws and regulations require deduction of such taxes at the source of payment, the purchaser shall effect such deductions from the payments due to the supplier. The remittance of amounts so deduction and issuance of certificate for such deductions shall be made by the purchaser as per the laws and regulations inforce. Nothing in the contract, shall relieve the supplier from his responsibility to pay any tax that may be levied in India on income and profits made by the supplier in respect of this contract.
- 21.3 The suppliers staff, personnel and labour will be liable to pay personal income taxes in India in respect of such of their salaries and wages as are chargeable/ inforce, and the supplier shall perform such duties in regard to such deductions thereof as may be imposed on him by such laws and regulations.

22. Completeness:

The execution of the project is on turnkey basis and the contractor shall be responsible for providing all the necessary civil works, equipments, materials which is not indicated in the DNIT but required and essential for completeness and successful testing & commissioning of the project within the contract price.

23 Consignee:

The contract (self) shall consignee Joint inspection/ Verification will be made by representatives of the contractor and PEDDA after receipt of material and commissioned before release of payment under clause 3 of section III.

24. Delivery and Commissioning Schedule

The engineering, design, supply order and commissioning along with associated civil works would be completed indicated at completion schedule of Section –VI.

25. The quantity of Solar PV Packs shall be specified in the work order/ orders. The minimum quantity which will be procured in one year is expected to be 1000 Nos. approximately. However the figure is tentative which may be increased or decreased by PEDDA. The PEDDA reserve the rights to increase or decrease the quantum of work and shall be no financially liability in any case if the quantum of work is less than the tentative quantities given in the bid.

26. Jurisdiction:

All legal proceedings in connection with this purchase order/contract shall be subject to the territorial jurisdiction of the local civil courts at Chandigarh only.

27. Resolution of Disputes

- i. The parties shall attempt to resolve any dispute, arising out of or in connection with this Agreement (herein after referred as the dispute), by mutual discussions. In the event that any dispute cannot be resolved between the Parties within a period of 30 (thirty) days of the commencement of the discussions, then such dispute shall be settled under the Arbitration and Reconciliation Act, 1996. The arbitration shall be conducted at Chandigarh, in English language. Any award given by the arbitrators shall be final and binding on the Parties and shall be in lieu of any other remedy within the meaning of Arbitration and Reconciliation Act, 1996.
- ii. All disputes relating to this working shall be subject to the jurisdiction of courts in Chandigarh and Chief Executive PEDDA shall be the sole arbitrator.
- iii. Neither Party shall resort to any proceedings in the court except for the enforcement of award in respect of a dispute having first exhausted the remedy under this clause.
- iv. During the subsistence of the arbitration proceedings both parties shall continue to perform their respective obligations under this agreement provided that the right of either party to terminate this Agreement is in accordance with the provisions thereof shall not be effected by the subsistence of arbitration proceedings.

SECTION – IV

**SCHEDULE OF
REQUIREMENTS AND
SPECIFICATION FOR 300 W_p
SPV POWER PACKS**

The illustrative Schedule of requirements in accordance with the specifications contained in this document for 1000 Nos. x 300Wp SPV grid interactive Power Packs.

| Sr. No. | Brief Description | Units | Make |
|---------|--|-------------------------|---|
| 1 | SPV modules for each system (Each Module not less than 150wp) in consignment of 300Wp | 1 Set totaling 300Wp | Indigenous PV Module with IEC 61215:2005 |
| 2 | SPV module mounting structure suitable for accommodating SPV modules including foundation as per specifications. | 1 Set | G.I. |
| 3 | 500 VA Power Conditioning Units (Inverter) as per specifications | 1 No. | As per bid document specification and certificate issued by the of MNRE's approved test centers |
| 4 | Terminal Box with 32 Amp. MCB | 1 No. | TYCO/ HENSEL |
| 5 | Cable 6 MM Square 2core | Average 10 RMT per site | Finolex/ CCI/ Havells |
| 6 | Battery bank with suitable box as per specifications Tubular plated electrolyte flooded 12V- 150AH at C/10 Or T. Gel 12V-150Ah @ C/10 | 1 No. | Exide/ HBL |
| 7 | Any other equipment required to complete the installation | At sites | |
| 8 | All civil works related to grouting of the structures. | | Each site as PWD |

Scope of Work also Includes following Services:

| | | |
|----|--|-------|
| 9 | Warranty of the SPV Power Pack for a period of 5 years from date of commissioning of the power pack as per scope | |
| 10 | Engineering, electrical drawings and installations and O&M manuals | 1 set |
| 11 | Maintenance of Power Pack for 5 years from the date of Commissioning | |

Note :

- The requirements for the plant and machinery are indicated in the schedule of requirements. The items mentioned in the schedules are only indicative and the suppliers are required to include any other item left out in the schedule in this scope. Complete details and quantity of mandatory spare parts shall be furnished by the supplier in their bid. Suppliers shall offer their complete design along with drawings for the plant in their bids. The make of the equipment/items offered should be got approved from the purchaser, during detailed engineering.
- All items mentioned above must be conforming to latest MNRE specifications.

GENERAL DESCRIPTION

Each SPV power pack shall have capacity of 300wp. The power packs shall provide a reliable and independent power supply to the critical AC loads i.e lighting, fans and TV etc. as decided by the PEDDA/ End User on site to site basis. Optimum SPV Capacity Utilization will be the important factor for loading of Inverter.

1. Solar Photovoltaic Modules (Crystalline Silicon)

- 1.1 The Solar PV module capacity should not be less than of 150 Wp. The Photovoltaic modules must be tested and certified by an independent testing laboratory that is accredited in accordance with ISO Guide 25. **The module type must be qualified as per IEC 61215 (Second edition) or IEEE 1262 or CEC 503 for Crystalline silicon. "Only indigenously manufactured PV modules will be used in Off-grid projects."**
- 1.2 Photo / electrical conversion efficiency of SPV module shall be greater than 14%. Since the modules would be used in a high voltage circuit, the high voltage insulation test shall be carried out on each module and a test certificate to that effect provided.
- 1.3 Maximum degradation not more than 10% at the end of 10 years and 20% at the end of 25 years.
- 1.4 Other general requirement for the PV modules and subsystems shall be the following:
 - (a) Raw materials and technology employed in the module production processes shall not be considered relevant so long as the given specifications are satisfied.
 - (b) The rated output power of any supplied module shall not vary more than 3(three) percent from the average power rating of all modules.
 - (c) The peak-power point voltage and the peak-power point current of any supplied module and/or any module string (series connected modules) shall not vary more than 3 (three) per cent from the respective arithmetic means for all modules and/or for all module strings, as the case may be.
 - (d) Except where specified, the front module surface shall consist of impact resistant, low-iron and high-transmission toughened glass.
 - (e) The module frame, if any, shall be made of a corrosion-resistant material which shall be electrolytically compatible with the structural material used for mounting the modules.

- (f) The module shall be provided with a junction box with provision of external screw terminal connection and with arrangement for provision for by-pass diode. The box shall have hinged, weather proof lid with captive screws and cable gland entry points.
- (g) Identification and Traceability
Each PV module used in any solar power project must use a RF identification tag. The following information must be mentioned in the RFID used on each module. The RFD should be installed as per MNRE guidelines and must be able to withstand harsh environmental conditions.
 - a) Name of the Manufacturer of PV module
 - b) Name of the manufacturer of Solar Cells.
 - c) Month and year of the manufacture (separately for solar cells and module).
 - d) Country of origin (separately for solar cells and module).
 - e) I-V curve for the module.
 - f) Peak wattage, I_m , V_m and FF for the module.
 - g) Unique serial no and model no of the module.
 - h) Date and year of obtaining IEC PV module qualification certificate.
 - i) Name of test lab issuing IEC certificate
 - (h) Other relevant information on traceability of solar cells and module as per ISO 9000 series.

2. Module Structure

PV Panel Structures

1. Wherever required, suitable number of PV panel frame shall be provided. Frame shall be of flat-plate design.
2. The module frame material shall be G.I. and fasteners/ nuts and bolts should be stainless steel only.
3. The frame shall be designed to allow easy replacement of any module.
4. The frame shall be designed for simple mechanical and electrical installation. There shall be no requirement of welding or complex machinery at the installation site. The civil works if at all required will have to be done by the Supplier.
5. The supplier shall specify installation details of the PV modules and the support frame with appropriate diagrams and drawings. Such details shall include, but not limited to, the following;
 - a) Determination of true south at the site;

- b) Array tilt angle to the horizontal, with permitted tolerance;
- c) Details with drawings for fixing the modules;
- d) Details with drawings of fixing the junction/terminal boxes;
- e) Interconnection details inside the junction/terminal boxes;
- f) Frame installation details and drawings;
- g) Inter-panel/Inter-row distances with allowed tolerances; and
- h) Safety precautions to be taken.
- i) Design of module frame for wind speed of 200km/hr

All nuts and bolts shall be of very good quality stainless steel. Detailed design and Drawing of the module mounting structures shall have to submitted to PEDA for acceptance before execution of work.

3. **PCU for SPV Power Packs**

The power conditioner unit Capacity 500VA should convert DC power produced by SPV modules, in to AC power.

- 500VA – Single phase Output
- Frequency – 50 Hz
- Waveform and regulation – Pure sinewave, 220V \pm 2%
- Efficiency- > Minimum 85% at full resistive load

SALIENT FEATURES & BRIEF TECHNICAL SPECIFICATIONS:

- PCU should operate in both modes stand alone/ grid connected & should have provision for taking DC input energy from Solar PV & charging of battery bank & also import of AC power from Grid during less energy from Solar PV with supply of power from meeting dedicated loads.
- High Efficiency Bi-Directional inverter systems for optimized power conversion at all times.
- Full Automatic Operation with no break in supply during the transitions from one mode to another mode.
- LCD Display and monitoring, instantaneous data, and charging set points.
- LCD display should provide voltage, current, load %, KVA%, instant load, total battery voltage, charging & discharging current, over temp etc.
- Integrated MPPT Solar Charge Controller.
- Over current, battery over charge protection, PV Reverse polarity, Reverse current flow, High temperature protection should be provided.
- Built for harsh working environment.

- For ease of installation Operation & Maintenance, safety the Power Condition Unit and to be integrated into a single self standing/ wall with rubber gourmet mounting enclosure having AC & DC measuring, control & protection system. The supplier will submit the design details of this enclosure to PEDA for approval.
- The Power Condition Unit/ inverters should comply with applicable IEC 61683/ IS 61683 for efficiency measurement and environmental tests as IEC 60068-2 (1,2,14,30)/ equivalent BIS std.
- The charge controller/ MPPT Units should qualify IEC 62093 and IEC 60068-2 (1,2,14,30)/ equivalent BIS std. The enclosures should IP 65 (for outdoor)/ IP21 (indoor) are as per IEC 529 standard.
- Automatically restart after overload triggered shutdown.
- Surge Protection Device (SPD) on AC and DC side.
- Energy source: SPV and Grid power.
- The PCU's should be tested from the MNRE approved test centres/ NABL/ BIS accredited testing- calibration laboratories. In case of imported power conditioning units, these should be approved by international test laboratories.

1. Factory Testing:

- A) A factory Test Report (FTR) shall be supplied alongwith the inspection call after all tests. The FTR shall include detailed description of all parameters tested qualified and warranted.

After receipt of inspection call, Factory testing of the PCU should be carried out and witnessed by the Purchaser's Engineers at the manufacturers premises.

2. Codes and Standards

The quality of equipment supplied shall be controlled to meet the guidelines for engineering design included in the standards and codes listed in the relevant ISI and other standards, such as :

IEEE 928 Recommended Criteria for Terrestrial PV Power Systems.

IEEE 929 Recommended Practice for Utility Interface of Residential and Intermediate PV Systems.

IEEE 519 Guide for Harmonic Control and Reactive Compensation of Static Power Controllers.

National Electrical NEPA 70-(USA) or equivalent national standard.

National Electrical Safety Code ANSI C2- (USA) or equivalent national standard.

JRC Specification 503 (Version 2.2 March 1991) or JPL Block V standard for PV modules.

IEC 61683/ IS 61683- Efficiency measurement of PCU/ inverters

3. **Cables**

- 3.1 Cabling shall be carried out as per IE Rules. All cabling should be in cable pipes with proper water/ moisture protection sealing.
- 3.2 Wires: Where mentioned, only copper wires of appropriate size and of reputed make shall have to be used.
- 3.3 Cables Ends: All connections are to be made through suitable cable/lug/terminals; crimped properly & with use of Cable Glands.
- 3.4 Cable Marking: All cable/wires are to be marked with proper manner by good quality ferule or by other means so that the cable can be easily identified.

All the cables required for the plant will be provided by the manufacturer. Any change in cabling sizes if desired by the bidder/supplier be got approved after citing appropriate reasons. All cable schedules/layout drawings have to be got approved from the purchaser prior to installation. All cables conform to IS 694/1554 and as per IEC 60189 standard.

4. **Battery Bank:**

The Battery will provide the backup/regular power as per design, engineering and as per IEC 61427/ IS 1651/ IS 13369/ IS 15549 standard/ codes.

Storage capacity:

For 12V, 150AH @ C/10 for each Power Pack with suitable battery box.

Type: Tubular Plated Electrolyte Flooded Battery, Make Exide/HBL.

Or

T-Gel 12V-150Ah @ C/10, Make Exide/HBL

Note: PEDDA should have right to select the type of battery.

5. **Civil Work**

SPV module mounting frame should be grouted as per PWD B&R specifications.

6. **Installation**

Electrical installation of buildings requirement for SPV Power Supply system should be as per IEC 60634-7-712.

7. **Application:**

Tube, Fans etc. will be connected with this Power Packs

8. **Drawings & Manuals**

3 copies of Engineering, electrical drawings and installation and O&M manuals are to be supplied

Bidders shall provide complete technical data sheets for each equipment giving details of the specifications along with make/makes in their bid along with basic design of the power plant along with protection equipment. Approved ISI and reputed makes of equipment be used.

For complete electro-mechanical works, bidders shall supply complete design, details and drawings for approval to PEDDA before progressing with the installation work.

SECTION-V

TECHNICAL BID TO BE SUBMITTED ON LINE Bid Form, and other Formats

**(All forms/schedules and
formats to be filled, signed,
stamped scanned and
uploaded)**

BID FORM
(To be submitted on letter head of Bidder)

Reference No:

Place:

Date:

To

Executive Director,
Punjab Energy Development Agency,
Solar Passive Complex,
Plot No.1 & 2, Sector 33-D,
Chandigarh

Subject: Design, Engineering, Supply, Installation and Commissioning of 1000 Nos. SPV Solar Power Packs having 300Wp capacity each including warranty & maintenance for 5 years with Battery Backup in the State of Punjab (India).

Dear Sir,

1. We have read and examined the tender documents relating to the subject cited works (hereinafter referred to as "Works") as issued by you:
2. Having examined the Tender Documents and being duly authorized we, hereby, bid for the execution, and completion of the Works referred to in the Tender Documents upon the terms and conditions contained or referred to therein and in accordance to all respects with the specifications, designs, drawings and other details given therein.
3. Attached to this letter are copies of original documents defining
 - (a) Our legal status;
 - (b) The principal place of business; and
 - (c) The place of incorporation (for bidders that are corporations), or the place of registration and the nationality of the owners (for Bidders that are member ships or individually owned firms).
4. 'PURCHASER' and its authorized representatives are hereby authorized to conduct any inquiries or investigations to verify the statements, documents, and information submitted in connection with this Bid, and to seek clarifications from our bankers and employers regarding any financial and technical aspects. This Bid shall also serve as authorization to any individual or authorized representative of any institution referred to in the supporting information to

provide such information deemed necessary and as requested by you to verify statements and information provided in this application, such as the resources, experience, and competence of the Bidder.

5. We agree to keep this Bid open for acceptance for 90 days, or such other extended period as may be required by you and agreed by us, from the date of opening of the Bid, and also agree not to make any modifications in its terms and conditions of our own accord.
6. A sum of Rs..... Lacs/- (Rs. lacs only) is hereby forwarded in form-----
----- Bank as earnest money three IPG module (hereinafter "Earnest Money Deposit"). We agree if we fail to keep the validity of Bid open, as aforesaid, or we make any modification in the terms and conditions of our Bid of our own accord or after the acceptance of our Bid if we fail to execute an Agreement as prescribed in the Tender Documents or commence the execution of the works as provided in the Tender Documents, we shall become liable for forfeiture of the Earnest Money Deposit. In such an event you shall, without prejudice to any other right or remedy, be at liberty to forfeit the said Earnest Money Deposit absolutely.
7. We certify that the Bid submitted by us is strictly in accordance with the terms, conditions, specifications etc. as contained in the Tender Documents, and it is further certified that it does not contain any deviations to the aforesaid documents and that deviations or variations if any are duly disclosed by us in the Compliance Statement.
8. The bid is made with the full understanding that:-
 - a) Bids by qualified bidders will be subject to verification of all information submitted for qualification at the time of bidding
 - b) PURCHASER reserves the right to:
 - (i) Amend the scope and value of any work bid under this tender.
 - (ii) Reject or accept any application, cancel the tender process and reject all bidders by giving a written notice.
 - c) PURCHASER shall not be liable for any actions taken under (b) I and ii above.
9. We confirm that the bid as well as any resulting agreement, will be signed so as to legally bind all principal manufacturers, jointly and severally.

10. We undertake, if our bid is accepted, and on receipt of the Letter of Award to commence the works and to complete and deliver the whole of works comprised in the contract within the period stated and in compliance with the tender documents.
11. If our bid is accepted, we will furnish Performance Security Deposit as per terms & conditions mentioned in DNIT.
12. We understand that you are not bound to accept the lowest or any bid you may receive.
13. The undersigned declare that the statements made and the information provided in the Bid including the completed applications and formats are complete, true, and correct in all aspects.

We have gone through carefully all the Bid conditions and solemnly declare that we will abide by any penal action such as disqualification or black listing or termination of contract or any other action deemed fit, taken by, the Department against us, if it is found that the statements, documents, certificates produced by us are false / fabricated.

We hereby declare that I/We are eligible in term of Clause No.2 of Section II

List of Enclosures:

Date of Submission:

**(Signature of the Bidder)
(Seal)**

CHECK LIST

The following documents enclosed with the offers (Please tick Yes or No):-

| | | | |
|-----|--|---|---------|
| 1. | Empanelled certificate of issued by the MNRE, GOI. | : | Yes/ No |
| 2. | Audit balance sheets for last three financial years | : | Yes/ No |
| 3. | The bidders is in profit from last two financial years or net worth of last two financial years. | : | Yes/ No |
| 4. | Sufficient experience for supply and installation of SPV systems i.e. Power Packs, Street Lighting and Power Plant. (Documentary proof like work order and completion certificate) | : | Yes/ No |
| 5. | IEC 61215: 2005 submitted with Model, Make and Type. | : | Yes/ No |
| 6. | Test Reports of PCU/ Inverter issued by the MNRE, GOI. | : | Yes/ No |
| 7. | Test Reports of Battery issued by the MNRE, GOI. | : | Yes/ No |
| 8. | Sufficient well trained man power is available for the maintenance of the system if yes, mentioned detail separately. | : | Yes/ No |
| 9. | Service centre for maintenance of SPV Power packs is available. If yes, mention place with complete contact No. and address. | : | Yes/ No |
| 10. | If the supplier is manufacture or system integrator. If bidder is authorized supplier, authorization certificate on letter head of manufacture must be submitted with offer. | : | Yes/ No |
| 11. | Sample of the system i.e. PV Panel, PCU, Battery, Cables etc. If yes provide the separately detail of sample. | : | Yes/No |

(Signature & Stamp)

FORM 1

GENERAL INFORMATION

| | | |
|----|---|---|
| 1. | Name of Bidder: | |
| 2. | Head office address: | Local office address (if any): |
| 3. | Contact name: Telephone: Mobile No. | Contact name: Telephone: Mobile No. |
| 4. | Fax: E-mail ID: | Fax: E-mail ID: |
| 5. | Place of incorporation/registration: | Year of incorporation/registration: |
| 6. | Main lines of business: | |

| Nationality of Owners | | |
|-----------------------|------|-------------|
| | Name | Nationality |
| 1. | | |
| 2. | | |
| 3. | | |
| 4. | | |
| 5. | | |

Signature with seal of bidder/

Note :

-
1. Use a separate sheet for manufacturer/s who authorized the supplier.

FORM 1 A

STRUCTURE AND ORGANIZATION

1. The Bidder is
 - a) a proprietary firm
 - b) a firm in member ship
 - c) a Limited Company or Corporation / Government undertaking
 - d) a voluntarily formed consortium by firms/companies
(Please give complete information
in respect of each member, indicate also the name of lead member)
2. Number of years of experience
 - a) as a contractor shouldering major responsibility
 - (i) in own Country
 - (ii) other Countries (specify Country)
 - b) as sub-contractor (specify main Contractor)
 - (i) in own Country
 - (ii) other Countries (specify Country)
2. For how many years has your Organization been in business of similar work under its present name?
3. Were you ever required to suspend construction for a period of more than six months continuously after you started? If so, give the name of project(s) and reasons thereof.
4. Have you ever left the work awarded to you incomplete? (If so, give name of project and reasons for not completing work.)
5. Attach an Organization Chart showing the structure of the company/association, including the names of the Directors and position of officers.

Signature with seal of bidder

FORM 2

TURNOVER RECORD

(Refer Clause 2.4 of Section II)

Name of Bidder:

| Annual turnover data for past three years (in all class of engineering works only) | | | | | | |
|---|---------|--------------------------|--|---|--------|------|
| Sr. No. | Year | Turnover (Rs. In Crores) | | Ref. to Page No. ____ to ____ of Bid | Profit | Loss |
| 1 | 2 | 3 | | 4 | 5 | 6 |
| 1. | 2013-14 | | | | | |
| 2. | 2014-15 | | | | | |
| 3. | 2015-16 | | | | | |

Signature with seal of bidder

Note:

1. Bidder must complete the information in this form.
2. *The information provided shall be certified by **Chartered Accountant and supported by Audited Balance Sheets**. Page marking of supported documents to be done & mentioned in column 4.*

FORM 2A

FINANCIAL CAPABILITY

| |
|----------------|
| Name of Bidder |
|----------------|

| | | |
|--------|-------------------|------------------------|
| Banker | Name of Banker | |
| | Address of Banker | |
| | Telephone | Contact Name and Title |
| | Fax | Tel fax E-mail ID |

| Financial information in Rs. Crores | Actual: Previous three financial years | | | |
|--|---|---------|---------|--|
| | 2013-14 | 2014-15 | 2015-16 | |
| 1. Total assets | | | | |
| 2. Current assets | | | | |
| 3. Total liabilities | | | | |
| 4. Current liabilities | | | | |
| 5. Profits before taxes | | | | |
| 6. Profits after taxes | | | | |
| 7. Net worth (Paid up share capital + reserves & surplus) | | | | |
| 8. Average Net worth for last Three Years | | | | |

Signature with seal of bidder

1. Bidder must fill in the form.
2. **Copies of the Audited Financial Statements, including Balance Sheets (stating that the above statement is true – signature of Chartered Accountant), for the last three years along with certified copy of Income Tax return submitted in the Income Tax Office are to be attached. Firms owned by individuals or member ships may submit their balance sheets certified by a Chartered Accountant, along with certified copy of income tax return.**
3. The statement of **Net Worth** is to be certified by a **Chartered Accountant**.
4. **Attach certificate from a Chartered Accountant that the bidder not suffered losses for any reasons whatsoever in two of the last 3 years.**

FORM 2B**FINANCIAL SOURCES**

| |
|-----------------|
| Name of Bidder: |
|-----------------|

Specify the sources of credit limit from Nationalized or Scheduled Bank (Other than a **Co-operative Bank**) to meet the cash flow demands of the Project

| Sr. No. | Source of financing | Amount (Rs in Crores) |
|---------|---------------------|-----------------------|
| 1. | | |
| 2. | | |
| 3. | | |
| 4. | | |
| | Total | |

Signature with seal of bidder

1. Bidder must fill the form. If necessary, use separate sheets to provide complete banker information. The letter from the bidder's bankers should be dated not earlier than **start date of issue of this tender**.

FORM 3

SPV POWER PLANTS AND SPV DEVICES/ SPV POWER PACKS
EXECUTED IN THE
LAST THREE YEARS

| |
|----------------|
| Name of Bidder |
|----------------|

| Sl. No | Name of Work and Name of Client | Contract Value (Rs in Crores) | % Share holding if work done in JV (if any)/Consortium | Date of Award | Completion Date/probable completion date | Value of Work done | Copy of Work Certificate at Page No. |
|--------------|---------------------------------|-------------------------------|--|---------------|--|--------------------|--------------------------------------|
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| | | | | | | | |
| | | | | | | | |
| Total | | | | | Total | | |

Signature with seal of bidder

Note:

1. Provide copies of Completion/ Work Certificates for each project certified by an officer not below the rank of Incharge/Executing Engineer. Work orders/testimonials may be verified if required for last 3 years.

FORM 4

**PERSONNEL REQUIREMENT FOR
THE PROJECT***

| |
|----------------|
| Name of Bidder |
|----------------|

Section-I

| Sr. No. | Post | Number of Persons proposed | Must Be Deployed | | |
|---------|---|----------------------------|------------------|---------------------------|------------------------------|
| | | | Qualification | Total Years of Experience | Years of Relevant Experience |
| 1. | Project Manager – cum – Resident Engineer | | | | |

Section-II

| Sr. No. | Post | Number of Persons proposed | Proposed to be Deployed | | |
|---------|---|----------------------------|-------------------------|---------------------------|------------------------------|
| | | | Qualification | Total Years of Experience | Years of Relevant Experience |
| 2. | Construction Engineer (Civil) | | | | |
| 3. | Construction Engineer (Mechanical/Electrical) | | | | |
| 4. | Site Supervisor | | | | |
| 5. | ETC Manpower | | | | |

Section-III – Proposed for Warranty obligations & O&M for 5 years

| Sr. No. | Post | Number of Persons proposed | Proposed to be Deployed | | |
|---------|--|----------------------------|-------------------------|---------------------------|------------------------------|
| | | | Qualification | Total Years of Experience | Years of Relevant Experience |
| 6. | Heads O&M | | | | |
| 7. | Electrical Technicians | | | | |
| 8. | Other Staff Please Indicate as per the O&M strategy of the bidder | | | | |

* The above Personnel requirement in Section-I is compulsory. Bidder will fill Personal requirement in Section-II which is indicative and can be increased/decreased as per project requirement with the approval of PEDDA. Personnel requirement in Section-III will be approved by PEDDA after award of contracts. The manpower indicated may be increased without any financial consideration.

Signature with seal of bidder

1. The C.V. of each Personnel mentioned in the above table (Sr. No. 1 to 8) must be provided separately at the time of Agreement.

FORM 5

LITIGATION HISTORY

| |
|----------------|
| Name of Bidder |
|----------------|

| Year | Award For or Against Bidder | Name of client, cause of litigation, and matter of dispute | Disputed amount (current value in Rs.) | Actual awarded Amount (in Rs.) |
|------|-----------------------------|--|--|--------------------------------|
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1. *Bidders should provide information on any history of litigation or arbitration resulting from contracts executed in the last five years or currently under execution.*

Signature with seal of bidder

FORM 7**TECHNICAL DETAIL FORM**

| S.No. | ITEM | PARTICULARS |
|-------|-----------------------------------|-------------|
| | SOLAR PHOTOVOLTAIC MODULES | |
| 1.1 | MANUFACTURER | |
| 1.2 | SIZE | |
| 1.3 | TESTING AND QUALIFYING STANDARDS | |
| 1.4 | P _{nom} | |
| 1.5 | P _{max} | |
| 1.6 | I _{mp} | |
| 1.7 | V _{mp} | |
| 1.8 | CELL EFFICIENCY | |
| 1.9 | No. of cells in a module | |
| 1.10 | Module efficiency | |
| 2 | POWER CONDITIONING UNITS | |
| 2.1 | TYPE | |
| 2.2 | Manufacturer Name | |
| 2.3 | AC Output Voltage | |
| 2.4 | DC input voltage range | |
| 2.5 | DC operating voltage | |
| 2.6 | Continuous rating | |
| 2.7 | Efficiency | |
| 2.8 | Operating temperature range | |
| 2.9 | Power control | |
| 2.10 | Protection features | |
| 2.11 | Overload capacity | |
| 2.12 | Total harmonic distortion | |
| 2.13 | Ingress protection | |
| 2.14 | Hardware platform | |
| 2.15 | DC input overload capacity | |
| 2.16 | Electronic metering accuracy | |
| 2.17 | Data logger accuracy | |
| 3 | Battery | |
| 3.1 | Type | |
| 3.2 | Manufacturers name | |
| 3.3 | Capacity Ah | |
| 3.4 | DOD % | |
| 3.5 | Rated normal voltage | |
| 3.6 | Rated maximum voltage | |
| 3.7 | Rated minimum voltage | |
| 3.8 | Applicable standard | |
| 3.9 | Ampere hour efficiency | |

SECTION - VI

COMPLETION SCHEDULE

Supply Schedule from the contractor will submit the pert chart showing activities to be performed, time period, etc. for approval of PEDDA.

| Sr.No. | Description | Time Required |
|---------------|--|--------------------------------|
| 1. | Award of contract | Say X date |
| 2. | Signing of Contract Agreement & submission of Performance Guarantee | X + 7 days |
| 3. | Submission of Bank Guarantee for release of Advance amount and submission of PERT Chart | X + 20 days |
| 4. | Submission of all documents related to procurement of all Bought-out items delivery schedule, etc. | X + 25 days |
| 5. | Submission of engineering & design documents for approval of PEDDA | X + 30 days |
| 6. | Inspection, by PEDDA | X + 40 days |
| 7. | Progressive deliveries of complete material, erection, tastings and Commissioning, etc. | X + 90 days i.e. upto |

Activities shown above are guiding factor for preparing time pert.

SECTION-VII

FORMATS & ANNEXURES

Annexure 1**List of Min. Spare Parts (For five years)**

| S. No | Item Description | Quantity (nos.) |
|--------------|--|--|
| 1 | Battery | Battery replacement to be carried out as and when required (within warranty period of 5 years PEDDA shall determine jointly with beneficiary & supplier that battery has become defective & needs replacement. The demand notice of PEDDA for battery replacement shall have to be accepted & battery to be replaced by the supplier during the warranty and maintenance period Free of cost including installation. |
| 2 | Power Conditioning Systems | Necessary spares for 5 years of operation & maintenance. The spares list to be got approved by the supplier as per original recommendation of the manufacturers from PEDDA at the time of design & engg. Document approval. |
| 3 | Miscellaneous (cable, fuses, screws, LED indications soldering material, lugs etc) | Required for 5 years of operation. Suppliers to keep the minimum required spares. |

The minimum spare parts to be maintained at each Service Centre.

CONTRACT FORM ON STAMP PAPER OF Rs.100/-

THIS AGREEMENT made theday of....., 20... Between (*Name of purchaser*) of (*Country of Purchaser*) (hereinafter "the Purchaser") of the one part and (*Name of Supplier*) of (*City and Country of Supplier*) (hereinafter called "the Supplier") of the other part :

WHEREAS the Purchaser invited bids for certain Goods and ancillary services viz., (*Brief Description of Goods and Services*) and has accepted a bid by the Supplier for the supply of those goods and services in the sum of (*Contract Price in Words and Figures*) (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) the Bid Form and the Price Schedule submitted by the Bidder;
 - (b) the Schedule of Requirements;
 - (c) the Technical Specifications;
 - (d) the General Conditions of Contract;
 - (e) the Purchaser's Notification of Award.
3. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

Brief particulars of the goods and services which shall be supplied/provided by the Supplier are as under:

| SL. NO. | BRIEF DESCRIPTION- OF GOODS & SERVICES | QUANTITY TO BE SUPPLIED | UNIT PRICE | Total Price |
|---------|--|-------------------------|------------|-------------|
| | | | | |

TOTAL VALUE:

DELIVERY SCHEDULE:

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, Sealed and Delivered by the

said (For the Supplier)

in the presence of:.....

Signed, Sealed and Received by the

*said (For the Supplier)

in the presence of:.....

Annexure - 4

PERFORMANCE SECURITY FORM

(To be stamped in accordance with Stamp Act if any, of the Country of the Issuing Bank)

To: _____ (Name of Purchaser)

WHEREAS (Name of Supplier)
(hereinafter called "the Supplier") has undertaken , in pursuance of Contract No.....
dated,..... 20... to supply.....(Description of Goods and
Services) (hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you
with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance
with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a Guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the
Supplier, up to a total of (Amount of the Guarantee
in Words and Figures) and we undertake to pay you, upon your first written demand declaring the
Supplier to be in default under the Contract and without cavil or argument, any sum or sums within
the limit of (Amount of Guarantee) as aforesaid, without your needing to prove
or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until theday of.....20.....

Signature and Seal of bank

.....
Date.....20.....

.....
Address:.....
.....
.....

BANK GUARANTEE FOR ADVANCE PAYMENT

(To be stamped in accordance with Stamp Act if any, of the Country of the Issuing Bank)

To: _____ (*name of Purchaser*)
_____ (*address of Purchaser*)
_____ (*name of Contract*)

Gentlemen:

In accordance with the provisions of the Special Conditions of Contract, which amends Clause 16 of the General Conditions of Contract to provide for advance payment, _____ (*name and address of Supplier*) (hereinafter called "the supplier") shall deposit with the Purchaser a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ (*amount of guarantee*(in figures and words)*).

We, the _____ (*bank or financial institution*), as instructed by the Supplier, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to the Purchaser on his first demand without whatsoever right of objection on our part and without his first claim to the Supplier, in the amount not exceeding (*amount of guarantee*in figures and words*).

We further agree that no change or addition to or other modification of the terms of the Contract to be performed thereunder or of any of the Contract documents which may be made between the Purchaser and the Supplier, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment received by the Supplier under the contract until _____ (date).

Yours truly,

Signature and seal :
Name of bank/
financial institution :
Address :
Date :

* An amount is to be inserted by the bank or financial institution representing the amount of the Advance Payment.

Annexure – 6

FORMAT FOR BANK GUARANTEE AGAINST 5 YEARS WARRANTY OF THE SYSTEM

(To be stamped in accordance with Stamp Act if any, of the Country of the Issuing Bank)

Bank Guarantee No. : Date:.....

To (Name of the Purchaser)

Whereas (Name of the Purchaser) hereinafter called “The supplier” has undertaken, in pursuance of contract no..... dated 20..... to supply (Description of Goods and Services) hereinafter called “the contract”.

AND WHEREAS it has been stipulated by you in the said contract that the supplier shall furnish you with a Bank Guarantee by a recognized Bank for the sum specified therein as security for compliance with the Supplier’s performance obligations under the contract for Operation, Maintenance and Repairs of the entire system including cost of spares for a period of 5 years from the date of issue of acceptance certificate by the purchaser.

AND WHEREAS we have agreed to give the Supplier a Guarantee

THEREFORE WE hereby affirm that we are Guarantors and responsible to you on behalf of the Supplier, up to a total of Rs..... (Amount of guarantee in words and figures) being 10% of the total cost of contract value and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the contract and without cavil or argument, any sum or sums within the limit of Rs..... (Amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until..... day of.....20.....

Signature and Seal of Guarantors

.....

.....

Date:.....20.....

Note :

1. SUPPLIER SHOULD ENSURE THAT SEAL AND CODE No. OF THE SIGNATORY IS PUT BY THE BANKERS, BEFORE SUBMISSION OF THE BANK GUARANTEES.

Annexure - 7

MANUFACTURERS' AUTHORIZATION FORM

No. _____ dated

Tender No. **PEDA/2016-17/28**

To

Dear Sir:

We _____ who are established and reputable manufacturer of _____ *(name & descriptions of goods offered)* having factory at *(address of factory)* do hereby authorize M/s _____ *(Name and address of Bidder)* to submit a bid, and sign the contract with you for the goods manufactured by us against the above Tender.

We hereby extend our full guarantee and warranty for the goods and services offered for supply by the above firm against supply, installation and commissioning of 1000 Nos. SPV Power packs in the state of Punjab.

Yours faithfully,

(Name)
(Name of manufacturers)

Note: i) This letter of authorization should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to legally bind the manufacturer. It should be included by the Bidder in its technical bid. (Copy of Power of attorney enclosed with this undertaking)

ii) This letter of authorization to be issued separately by each manufacturer of different items to be supplied by the bidder.

Annexure - 8**TECHNICAL DEVIATIONS**

Subject: Design, Engineering, Supply, Installation and Commissioning of 1000 Nos. SPV Solar Power Packs having 300Wp capacity each including warranty & maintenance for 5 years with Battery Backup in the State of Punjab (India).

Dear Sir,

Following are the Technical deviations & variations from the exceptions to the specifications of commissioning the Design, Engineering, Supply, Installation and Commissioning of 1000 Nos. SPV Solar Power Packs having 300Wp capacity each including warranty & maintenance for 5 years with Battery Backup in the State of Punjab (India). These deviations and variations are exhaustive. Except these deviations and variations, the entire work shall be provided as per your specifications and documents. The directions and variation are pointed at as per specification of MNRE, GOI specification reason.

| Sr. No. | Clause No. | Page No. | Statement of deviations and variations | Reason |
|----------------|-------------------|-----------------|---|---------------|
|----------------|-------------------|-----------------|---|---------------|

Date

Signature

Name

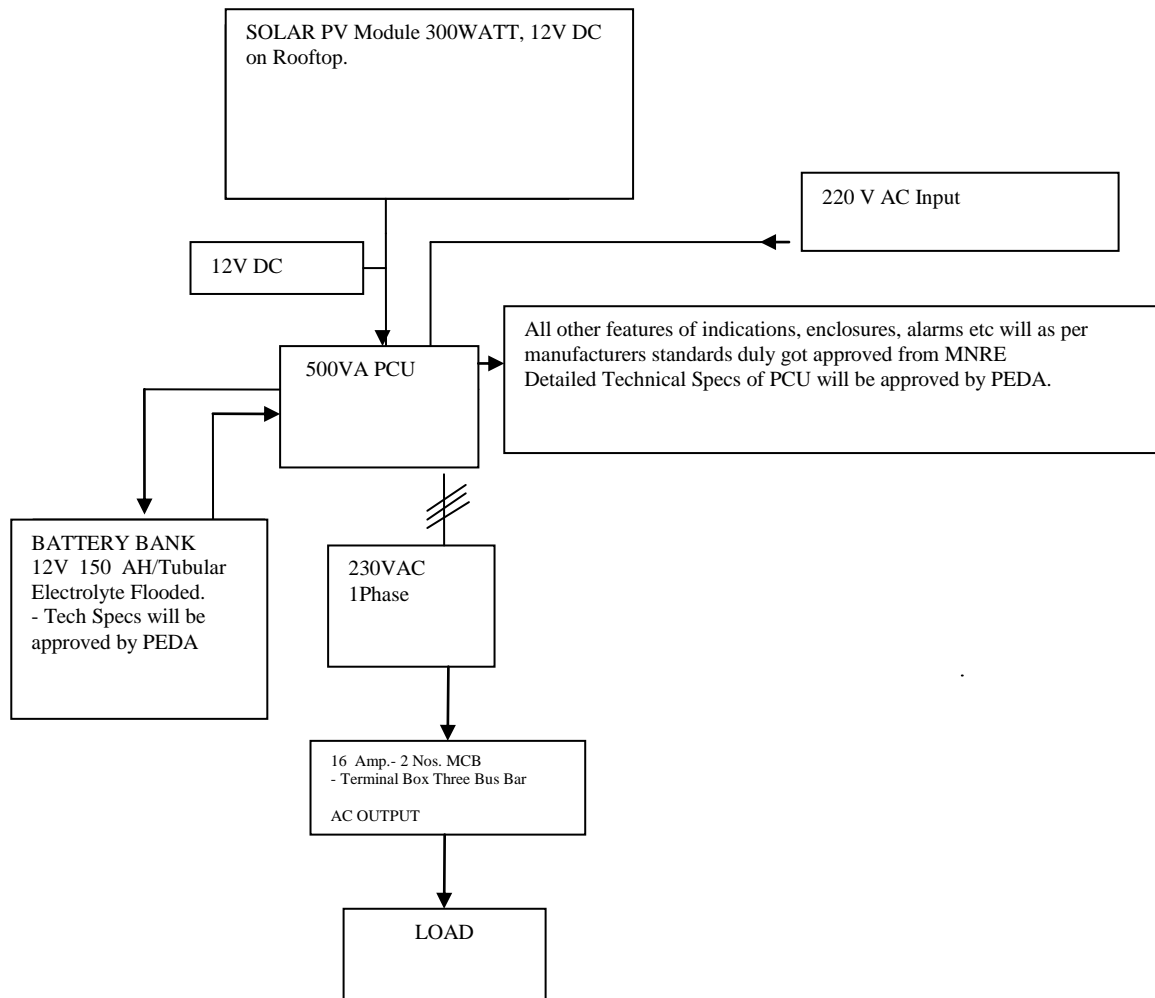
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Annexure- X

SCHEMATIC DIAGRAM OF PROPOSED SOLAR PHOTOVOLTAIC GRID INTERACTIVE SPV POWER PACK HAVING CAPACITY 300 WATT UNDER JAWAHAR LAL NEHRU NATIONAL SOLAR MISSION

NOTE: The Schematic below is indicative of the proposed load requirements which may alter detailed survey. The capacities of various parts shown are indicative. However, the bidder is required to design the system which will suit to meet these requirements and may suggest any modifications in load side. However, the Installed Capacity of SPV Panel and Battery Capacity will remain the same. The company will be fully responsible for successful operation of the PV system as a whole under the existing conditions.



Proposed Building Where PV will be installed:

Proposed room where PCU will be installed :

(Above will subject to final approval by PEDDA)

- The bidder is required to design the system by taking into consideration the solar insolation data for Punjab.
- It will be the responsibility of the contractor that the installation of PV on roof top will be without any damage, major alteration in the building.
- All the electrical wiring will be as per the relevant standards. Wherever necessary carriers like cable trays will be provided.
- Wherever necessary cables will be laid underground.
- Any other Indian standards which is required to be followed for such type of installations will be implied for these installations.