



**B. FINANCIAL ELIGIBILITY CONDITIONS:-**

1. Bidder shall have positive Net-worth in any one year in last three financial year.
2. Firm should have a minimum annual average turnover of Rs 500 Lacs in last three financial years.

In support of the claim of meeting the financial criterion, the bidder must furnish:

- a) Bidder shall submit—**Details of Financial Capability of Bidder** in prescribed **Format duly signed and stamped by a Chartered Accountant**.
- b) **Copy of Audited Annual Financial Statements** (including Balance Sheet, Profit & Loss, Account, Auditor Reports etc.) Submitted in bid shall be **duly signed and stamped by a Chartered Accountant**.

**Bidder should submit following documents along with Technical bid -**

1. Company Incorporation Certificate / Company Registration Certificate.
2. Copy of GST Registration no. & PAN no.
3. Balance sheet for last three years.
4. Turnover Certificate duly certified by practicing CA.
5. Last Three years Income Tax Return.
6. Experience Qualification as per tender eligibility condition. Copy of relevant **Work Order/ Contract/ Service Order**, clearly mentioning Nature of Work/Service, Various Components/Items, Scope of Work, Period, Value etc.
7. Bid security declaration form
8. Any other relevant documents

**C. Other Conditions:**

1. **Responsibility for executing Contract:** The contractor is to be entirely responsible for the execution of the contract in all respects in accordance with the terms and conditions as specified in the tender document.
2. The contractor shall not sublet transfer or assign the contract to any part thereof without the written permission of Manager (CS), ITI Ltd Mankapur. In the event of the contractor contravening this condition, Manager (CS), ITI Ltd Mankapur reserves the right to cancel the contract and place the contract elsewhere. Any loss or damage arising out of this situation has to be borne by the contractors and ITI shall not be responsible for it.



3. **Document:** The bidder should have a valid **PAN / TAN /GST No & other statutory document** as applicable and produce attested copies of such certificates along with the tender papers in

Technical Bid, failing which the tender is liable to be rejected. Check list to be attached.

**D. PRICES:**

- a. Prices are to be quoted in **Indian Rupees, FOR ITI Ltd Mankapur.**
- b. Prices quoted in the Price/Financial Bid must be meaningful and measurable in the context.
- c. Price must be quoted in original sheet of BOQ failing which the same is liable to be rejected.
- d. Offer shall be valid for minimum 150 days from the date of bid opening.

A. **RELAXATION OF PRIOR TURNOVER AND PRIOR EXPERIENCE FOR STARTUPS (AS DEFINED IN GAZETTE NOTIFICATION NO. D.L-33004/99 DATED 18.02.2016 AND 23.05.2017 OF MINISTRY OF COMMERCE AND INDUSTRY), AS AMENDED**  
**TIMETO TIME:** Relaxation of prior **experience and turnover** for start-ups is **applicable** to this tender.

For availing the relaxation, bidder is required to submit requisite certificate towards Start-up enterprise registration issued by Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and the certificate should be certified by the Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's Company/firm) and notary public with legible stamp.

The relaxation of prior experience and prior turnover to Startups [whether Micro & Small Enterprises (MSEs) or otherwise] is to be given to the specific goods/ job domains wherein they are registered for.

Since certificate of DPIIT towards recognition do not specify the goods/ job domain, startups are required to submit the documents for the same including the application submitted to DPIIT.

The certificate shall only be valid for the entity:

- (i) Upto ten years from the date of its incorporation/ registration and
- (ii) If its turnover for any financial years since incorporation/ registration has not exceed Rs.100 Crores.

Further, above document should be certified by the **Chartered Accountant** (not being an employee or a Director or not having any interest in the bidder's company/firm) and **Notary Public** with legible stamp.

In case of startup where the Financial statement of Startup (s) is not available and **Net Worth** could not be established with other documents like Memorandum of Association, etc., the certificate issued by Chartered Accountant/ Certified Public Accountant (CPA) may be considered.

"Those bidder from a country which shares a land boundary with India. If yes, whether the bidder is registered with the "competent authority".

Definition of country which shares a land boundary with India and Competent authority would be in accordance with Office Memorandum number F.No. 6/18/2019-PPD dated 23rd July 2020 issued by Ministry of Finance, Department of Expenditure, Public Procurement division, Government of India".



## SCOPE OF WORK

**NOTE: The SPV Modules for 1200 kWp Solar Power Plant shall be supplied by ITI Limited at site.**

A. Tentative BOQ (for tender purpose) for the work for Design ,Fabrication, Supply, Installation-Commissioning and 5 years Maintenance of 1200 KWp Grid Connected SPV Power Plant at ITI Limited, Mankapur, Sanchar Vihar, Mankapur ,Gonda , 271308(UP).

| S. N | Item Description  | Qty.               | Supply | E&C    | O&M    | Remark   |
|------|---|--------------------|--------|--------|--------|--|
| 1    | Solar PV module of capacity not less than 325 Wp as per technical specifications  | For 1200 KW        | By ITI | Bidder | Bidder | ITI will supply 325W Poly crystalline Solar Module. Bidder has to design the project Accordingly. Bidder to specify the quantity of Solar modules. |
| 2    | High grade MS with Zinc Coating/ Pre GI structures (as per Site requirement) of required sizes and shapes for fixing Solar panels and other   | For 1200 kWp       | Bidder | Bidder | Bidder | Final design shall be Submitted by successful bidder after placement of LoA.   |
| 3    | String Inverter, as per Technical Specifications.   | For 1200 kWp       | Bidder | Bidder | Bidder | <b>Make: Delta/Schneider/SMA/ABB</b>   |
| 4    | Transformer step up 415V/11KV, oil cooled   | 2.0 MVA            | Bidder | Bidder | Bidder | <b>Make: GE/CG/Equivalent make</b>   |
| 5    | Supply and installation of 11 kV 630 amps VCB equipped with ammeter voltmeter power meter and over current relay, earth fault relay and other protective devices with necessary CTs and PTs at termination side and ground site | 630 amps<br>02 Nos | Bidder | Bidder | Bidder | <b>Make: ABB, Schneider, L&amp;T, Siemens</b>  |
| 6    | Remote Monitoring Equipment (SCADA) Communication Equipment ,   | One Set            | Bidder | Bidder | Bidder | <b>Compatible with Inverter/PCU and with RS485/ Wi-Fi / Mod bus/LAN Communication Interface</b>  |



|    |  |                                     |        |        |        |   |
|----|--|-------------------------------------|--------|--------|--------|---|
| 7  | Supply of D.C. cables 6 Sq. mm/10 Sq. mm, 1C   | As per design and site Requirement  | Bidder | Bidder | Bidder | Size of the cable to be Decided based on voltage drop make drop. <b>Make: Polycab/KEI/Havells</b> |
| 8  | Supply, Installation of 11 KV bus bar for interconnecting new 11 KV with existing 11 KV panel . If required.   | As per design and site Requirement  | Bidder | Bidder | Bidder |   |
| 9  | Supply ,laying, Termination of XLPE 11 KV cable and supply ,Installation of all materials such as cable ,Guard wire etc. required for indoor/outdoor switchgear as per prevailing electricity rule and electrical safety directorate | As per design and site Requirement  | Bidder | Bidder | Bidder | Reputed Standard make   |
| 10 | LT panel (s) suitable rating for 1200 KWp  | As per design and site Requirement  | Bidder | Bidder | Bidder | Reputed Standard make   |
| 11 | Laying, termination of (overhead/Underground /surface) testing and commissioning of copper conductor. XLPE insulated armored cables (as per IS specifications ) of various sizes required to complete the work                       | As per design and site Requirement  | Bidder | Bidder | Bidder | Reputed Standard make   |
| 12 | Supply of HT 11 kV, Al armored AC Cables with size of 3C X 240 sq. mm minimum  | As per design and site Requirement. | Bidder | Bidder | Bidder | <b>Make:</b> National/PolyCab/KEI/Havells   |
| 13 | Supply and installation of all Control cables from termination point to solar site   | As per design and site Requirement. | Bidder | Bidder | Bidder | <b>Make:</b> National/PolyCab/KEI/Havells   |
| 14 | Laying/Termination, testing and commissioning of 11 KV XLPE insulated cable  | As per design and site Requirement. | Bidder | Bidder | Bidder |   |
| 15 | Supply , Installation of DCDB/ACDB/Junction Box / Array Junction Box and associate accessories   | As per design and site Requirement. | Bidder | Bidder | Bidder | Reputed Standard make   |
| 16 | <b>Earthing &amp; LA :</b> Supply , Ercetion, testing and commissioning of all earthing equipments and LA as per relevant IS standard and applicable IE rules to complete the work   | As per design and site Requirement. | Bidder | Bidder | Bidder | Calculation , Design & Drawing to be submitted for approval                                       |
| 17 | <b>Safety equipments -</b> Supply and fixing of CO 2 based fire equipments of reputed make ,ISI marked as per the actual site requirement  | As per design and site Requirement. | Bidder | Bidder | Bidder |   |



|    |   |                                     |        |        |        |  |
|----|---|-------------------------------------|--------|--------|--------|--|
| 18 | <b>Civil Works-</b> All the associated civil works complete in all respects, required to complete the work such as Mechanical structure foundation and cable trench work etc. will be in the scope of bidder. It includes demolition of existing mechanical /civil structure.   | As per design and site Requirement. | Bidder | Bidder | Bidder |  |
| 19 | <b>Metering System:</b> The bidirectional electronic energy meter (0.5 S Class) for measuring export-import energy meter confirming to relevant IS/IEC standard and as per regulation of respective state DISCOM i.e. UPPCL ,MVVNL for 11 KV outgoing feeders suitable for interfacing with GPS time synchronization equipment with suitable protective & control equipments. | As per design and site Requirement. | Bidder | Bidder | Bidder | Make: Secure. HPL and L&T Note: Net Met metering is temporary with hold in UP. Bidder has quote for supply & Installation of complete set of equipments including net metering along with Zero export solution. Metering application accordingly as soon as Net Metering is allowed by UPERC/UPPCL , bidder shall install the Net Metering system and regularized in with UPPCL. |
| 20 | Solar Energy meter as per requirement of connection points as guidelines of MNRE/DISCOM/UPPCL/ MVVNL  | As per design and site Requirement. | Bidder | Bidder | Bidder | Make: <b>Secure,HPL and L&amp;T</b>  |
| 21 | Suitable equipments. for HTDG synchronization   | As per design and site Requirement. | Bidder | Bidder | Bidder |  |
| 22 | Tool kit for Installation ,Testing and commissioning  | As per design and site Requirement. | Bidder | Bidder | Bidder |  |
| 23 | Misc. supply /works : Any other supply /work essential to complete the project work.  | As per design and site Requirement. | Bidder | Bidder | Bidder |  |

**Note:** The above BOQ is only for guidance purpose so that bidder gets an overview of the work to be executed. **However, it is mandatory for bidders to use the make given of the components as stated in the BOQ while designing of the project.** Bidders are requested to visit site before quoting the tender. Detailed BOQ covering preferred make, complete in all respects needs to be submitted by the bidder after the award of work to him and after the approval of detailed drawings of the project from ITI.

**B. The system shall consist of (but not limited to)following equipment:**

- (b) Remote Monitoring System (SCADA) with associate hardware
- (c) Module Mounting Structures (MMS) as per suitability of site
- (d) Cables and hardware



- (e) LT/HT Panel or conventional switch yard
- (f) Transformers of suitable capacity
- (g) Metering cubicle with Energy meter (Net Meter and check meters) at 11 kV switch yard in the PV plant
- (h) AC Distribution boxes and DC distribution boxes.
- (i) Earthing kits & Earth mat
- (j) Lightning arrestors in solar array
- (k) Tool Kits for maintenance along with personal protective equipment
- (l) Weather monitoring equipment (for measuring Solar Radiation, Temperature etc.)
- (m) Mandatory spares
- (n) Illumination system for the plant including control room & switchyard.
- (o) Consumable for Modules washing and other items during O & M.

**C. Grid interfacing, including all equipment required for the same such as isolators, lightning arrestor, panels, protection equipment, cables, conductors, earthing and SPV Panel yard etc. as per statutory requirements and comply to CERC Grid code and State Electricity Board.**

**D. Scope of Work of Contractor: -** The scope of work of the contractor is to survey, design, supply the material as per BoQ and any other item to complete Installation-Commissioning and 5 years O & M of SPV Power Plants. It includes:-

- Safe Storage, Safety and security of the Materials at Site.
- Design, Fabrication, Supply of MS Structures suitable for installation of 1200 KWp Grid Connected Solar Power Plant. The contractor shall make the installation shadow free.
- The Mechanical Structures be capable of withstanding a wind load of 150 km per hour after erection and installation (or as per local area need). The certificate is required by chartered engineer in this regard. Supply of material as per detailed BoQ but not limited to it.
- Material required such as cables glands, tags, cable trays, GI Strip for earthing material & item mention in above list etc. to complete job.
- Installation & commissioning of Module Mounting Structures, SPV Modules, String Inverter, Energy meters, Accessories etc.
- Installation of earthing material and lightning system, testing and commissioning of complete earthing and lightning system as per specification requirement.
- Laying, Termination, Glanding, Ferruling of all interconnecting cables among subarray, String Inverter, Conduiting, Cable Trays and load panel etc.
- Wiring of complete solar system as per requirement. Testing of DC/AC wiring as per requirement.





- **ITI shall hand over the Solar Module (ITI scope) at Site.**
- Any other work, tools & tackles required for completion of the project shall be arranged by the contractor.
- Meter cubical ,testing, CT testing in DISCOM Lab and liasioning with DISCOMS in the scope of contractor.
- All necessary items/manpower/arrangements required for Proper and Safe Installation &Commissioning of Power Plant will be arranged by the contractor. Any material other than mentioned in Scope of work which is required for I&C of Power Plants is in scope of the agency.
- Contractor shall re arrange the existing AC wiring if required.
- All arrangements for their deployed workman/manpower at site will be taken care by the contractor itself.
- Contractor/agency shall give declaration that site has been visited and all information towards timely completion of project has been collected and taken care before quoting for the above enquiry.
- Prices quoted must be firm and fixed. No price variation/escalation shall be allowed. Contractor shall arrange all the manpower and material required for inter-connection of the SPV Power Plant to the load.
- After successful installation – commissioning of the Power Plant Contractor shall get a certificate of installation, commissioning and satisfactory operation from beneficiary as per requirement of work order.
- After installation– commissioning of the Power Plant Contractor shall arrange the inspection of Power Plant from ITI as per work order requirement and expenses, if any, shall be borne by contractor.
- Contractor shall install and commission the Power Plant in the stipulated time given by the agency.
- Contractor will submit weekly Project Execution Plan (PEP) along with offer. In which contractor gives the details that how will project accomplished. Contractor shall also submit the PERT Chart for project scheduling & Management as per milestones mentioned in the tender document.
- Shall maintain the system for a period of 5 years from the date of completion of I&C Work mentioned in Completion Certificate.



- Shall maintain the MS / Pre GI Structures without any rusting for the period of 5 years.
- Site clearance and removal of trees for ground based solar power plant will be in the scope of bidder. All the approval from the statutory authority from the concern department for above work will be in the scope of bidder. Dismantling the structure of cycle stand at the proposed site will be in the scope of bidder  
.Water supply if required will be provided by ITI Ltd. Mankapur at one point and further network of water supply will be in the scope of bidder.
- Electric supply if required will be provided by ITI Ltd. Mankapur at one point and network of electric supply will be in the scope of bidder.
- Material handling will be in the scope of bidder.

**E. The following works will be carried out by the contractor at site:-**

- i. **Civil work for module mounting structures of SPV module**
  - a) Contractor shall prepare foundations (as per final design in accordance with site requirement) for installation of Modules Mounting Structures complete with plaster and White Wash color as per requirement. Any other civil work required for installation- commissioning of the Power Plant shall be carried out by contractor as per work order requirement and to the ITI Ltd.satisfaction.
  - b) Preparation of cement, concrete (mixing as per final design) & mortar foundation in the designed ratio for all MS Mounting Structures as per layout/drawing enclosed.
    - i **Size of Foundation:-**
    - B. **Nos. of GI bolts used in each Foundation:-**
    - C. **Nos. of Foundation:-**
  - c) Contractor shall supply and fix the reinforced Iron Rod (suitable size as per site requirement) for strengthening of Civil foundation.
  - d) Contractor shall fix the Module Mounting Structures of suitable height as per actual site requirement.
- ii. **Fixing & Installation of solar system equipments**
  - a) Fixing of Module Mounting Structure & Accessories
  - b) Fixing of SPV module
  - c) String Inverter with data logger





- d) Installation of Export-Import & Solar Meter
- e) Earthing and Lightning Arrestor
- f) All the cables (AC and DC both)
- g) Wiring of complete SPV Power Plant & testing, commissioning of the same
- h) Danger/Caution Signboard

**Note: - Defect liability period is 5 years from date of commissioning and handing over the Power plant(s) to beneficiary.**

**iii. Installation of Earthing material and Lightning system, testing and commissioning**

- a) Earthing including earthing pits, earth electrodes, earthing strips, grounding conductor of various sizes, Cu strip for flange jumper and Cu earth plates etc as per specification/standard drawing.
- b) Lightning surge protection must be provided for the SPV array and other solar system components.
- c) GI pipes, GI Cable-trays and accessories, cable markers, identifier tags, GI saddles and all other associated accessories as required for cable laying.
- d) FLP type double-compression nickel-plated brass cable glands, tinned-copper lugs, clamping material etc. for cable termination.

Fabrication and supply of MS frames, supports, canopies and brackets for miscellaneous electrical equipments, including welding, supply of bolts, nuts etc for mounting and other necessary supplies, all inclusive of painting etc. as required.

**iv. STANDARDS:**

The work shall be carried out in the best work man like manner in conformity with this specification, the relevant specifications/codes of practice of Indian Standard Institution, approved drawings and instructions of the Engineer-in-Charge or his authorized representative issued from time to time. In case of any conflict between the standards, the instructions of Engineer-in-Charge of ITI Ltd. shall be binding.

**v. EARTHING NETWORK:**

The earthing installation shall be done in accordance with the earthing drawings, specifications and the standard drawings. The entire earthing system shall fully comply with the Indian Electricity Act and Rules framed there under.



vi. **TESTING:**

Earthing systems/connections shall be tested as follows:

- a) Resistance of individual electrodes shall be measured by MEGGER after disconnecting it from the grid.
- b) Earthing resistance of the grid shall be measured after connecting all the electrodes to the grid. The resistance between any point on the metallic earth grid and the general mass of earth shall not exceed 1 ohm.
- c) The resistance to earth shall be measured at the following:

At each electrical system earth or system neutral earth. At each earth provided for structure lightning protections.

At one point on each earthing system used to earth electrical equipment enclosure. At one point on each earthing system used to earth wiring system enclosures such as metal conduits and cable sheaths armor.

vii. **LIGHTNINGPROTECTION (ECE Type):**

Lightning protection system shall generally comprise lightning finials (air terminals), roof conductors, down conductors, test links, and earth electrodes. The number, types, materials and sizes shall be in accordance with the drawings.

viii. **MISCELLANEOUS MATERIALS SPECIFICATIONS:**

- a) **Connectors & Termination:** Cable terminations shall be made with tinned copper crimped type solder less lugs of reputed make for all aluminum conductors and stud type terminals.
- b) **Cable Identification:** Cable tags shall be of 2 mm thick, 20 mm wide aluminum strap of suitable length to contain cable number, equipment no.,etc.
- c) **Ferrules:** Ferrules shall be of approved type size to suit core size mentioned and shall be employed to designate the various cores of control cable by the terminal numbers to which the cores are connected for ease in identification and maintenance.
- d) **Cable Glands:** Cable glands to be supplied shall be nickel-plated Brass double compression type of reputed make.
- e) **Cable Trays:** This shall be either prefabricated hot dip galvanized sheet steel tray of suitable Size.