

**MISHRA DHATU NIGAM LIMITED**

**A Govt of India Enterprise**

**P. O Kanchanbagh, Hyderabad – 500058 (TELANGANA), India.**

**Corporate Identity Number : U14292AP1973GOI001660**

**Phone: 040 – 24340001 (10 Lines), 24184202, Fax: 040 – 24340764**

**e Mail ID: [snitesh@midhani.com](mailto:snitesh@midhani.com), website: [www.midhani.com](http://www.midhani.com)**

**Tender Notice No. : MDN/PUR/1960057/CG/ADVT/233/16-17, Date: 03/01/2017**

<b>Start of Issue of Tender Documents:</b>	<b>03/01/17 at 11.00 Hrs</b>
<b>End of Issue of Tender Documents up to:</b>	<b>19/01/17 up to 17.00 Hrs</b>
<b>Receipt of Tender on or before:</b>	<b>20/01/17 by 10.30 Hrs</b>
<b>Opening of Tender Date:</b>	<b>20/01/17 at 11.00 Hrs</b>

**Item Description and Quantity:**

- 1. Design, Supply, Installation, Testing, Erection & Commissioning of 60KWp Roof Top Model Solar Photo Voltaic Power Plant with 5 years of Comprehensive Annual Maintenance Contract – 1 No.**

**Note:**

- EMD:** All bidders shall submit an EMD amount of INR 60,000/USD 900 in the form of Demand Draft/ Banker's Cheque drawn in favour of M/s. Mishra Dhatu Nigam Limited, Hyderabad or through online payment with proof thereof or Bank Guarantee shall be enclosed with Techno-Commercial Bid. If EMD is not found enclosed, such offers would be liable for rejection. Bank Guarantee shall be valid for a period of 180 days.
- Tender Fee:** All bidders shall submit Tender fee amount of INR 1,000/USD 15 in the form of Demand Draft/ Banker's Cheque drawn in favour of M/s. Mishra Dhatu Nigam Limited, Hyderabad or through online payment with proof thereof in favour of Mishra Dhatu Nigam Limited through scheduled Bank payable at Hyderabad.

- iii) **All Bank Guarantees (EMD/SD/PBG) submitted:**
- In Indian Currency – Shall be from a Nationalized Bank/ Scheduled Commercial Bank encashable in India.
  - In Foreign Currency – Shall be from SBI, Frankfurt/ SBI, Newyork/ any Nationalized Bank or Scheduled Bank encashable in India.
  - All Bank Guarantees shall have an additional claim period of three months from the date of expiry except EMD and in our prescribed formats only.

iv) **Bank Details:**

**Name of the Firm** : M/s. Mishra Dhatu Nigam Limited  
**PAN No.** : AABCM6345A  
**Bank Name** : HDFC Bank Ltd.  
**Branch Address** : Lakdikapul Branch, Hyderabad.  
**Account No.** : 00210330000440.  
**IFSC Code** : HDFC0000021  
**MICR Code** : 500240002  
**SWIFT Code** : HDFCINBBHYD  
**Type** : Current account.

**List of Tender Documents:-**

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• <b>General Terms &amp; Conditions for Indigenous Offers</b>	<b>Annexure – II</b>	<b>05</b>
• <b>General Terms &amp; Conditions for Import Offers</b>	<b>Annexure – III</b>	<b>06</b>
• <b>Procedure to be followed for Submission of Tender</b>	<b>Annexure – IV</b>	<b>01</b>
• <b>Bank guarantee Format for earnest money deposit</b>	<b>Annexure – V</b>	<b>02</b>

  
**Nitesh S**  
**Dy Mgr (Pur)**

**SPECIFICATIONS & BID DOCUMENT**

**FOR**

**Design, Supply, Installation, Testing, Erection and Commissioning of  
60(3\*20) kWp Grid Connected Roof Top Model Solar Photo Voltaic Power  
Plant with Five Years of Comprehensive Maintenance Contract**

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**Design, Supply, Installation, Testing Erection and Commissioning of 60(3\*20) kWp Grid Connected-Roof Top Model Solar Photo Voltaic Power Plant aggregated capacity with Five Years of Comprehensive Maintenance Contract**

**1 INTRODUCTION**

MIDHANI plans to generate solar power by installing a 3\*20 kWp capacity (Total 60kWp) Grid Connected Roof Top Model Solar PV power plant at MIDHANI QCL building north block of area approximately 450 sqm, QCL building south block of area approximately 450 sqm and corporate office of area approx 300 sqm.

Intent of this specification is to specify the requirement of MIDHANI, herein after referred to as the Employer, so as to enable the prospective bidders to submit their best techno-commercial bid for design, engineering, supply, execution of a 3\*20(60)kWp solar PV Power plant in its premises at MIDHANI including Civil works. The power plant has to be commissioned on the Roof Top within the Campus in the recommended location.

**2 INTENT OF SPECIFICATION**

Intent of the specification is to describe the requirement of the employer for procurement and installation of equipments, civil works and other auxiliary and support facilities and to provide techno-commercial inputs to bidders to enable them to prepare and submit their best offer to meet this requirement. The specification intends to cover the design, engineering, manufacture, supply, transportation, unloading, storage, in-plant transportation to site from stores, erection, testing & commissioning and performance guarantee and enabling works during execution.

Relevant information, documents for submission of offers are included in the subsequent sections of this Technical Specifications.

The specification shall be read in totality and the bid shall be prepared accordingly. The bidders shall consider and include in their offer any equipment/ system / service not specifically mentioned in this specification but essential for the completeness of the project in all respects as envisaged by the Employer.

**3 GENERAL PROJECT INFORMATION**

1	Employer	Mishra Dhatu Nigam Limited ( MIDHANI), ( A Govt Of India Enterprise under Ministry of Defence) P.O Kanchanbagh Hyderabad, Telangana State, 500058, India.
2	Project Title	Design, Supply, Installation, Testing Erection and Commissioning of 60(3*20)kWp Grid Connected Roof Top Model Solar Photo Voltaic Power Plant aggregated capacity with Five Years of Comprehensive Maintenance Contract after issue of FAC ( completion of one year defect liability period)
3	Project Location	MIDHANI QCL building approx 900 sqm (north & south blocks), Corporate office approx 300 sqm Kanchanbagh P.O. Hyderabad, Telangana State, 500058, India.
4	Ref. Temperature for Electrical Design	Maximum-- 45 <sup>0</sup> C Minimum-- 5 <sup>0</sup> C
5	Atmospheric Pressure	947.65h Pa
6	Climate	Tropical Dry & Wet

#### **4 SCOPE OF WORKS AND SERVICES**

Scope of Supply & Work includes Design, Engineering, Manufacture, Procurement & Supply of equipment and materials; testing at manufacturers works, inspection, packing and forwarding, unloading at site, associated civil works, services, permits, installation and incidentals, erection, testing and commissioning of 60(3\*20) kWp Solar PV Power Plant with associated equipments and materials on turnkey basis in MIDHANI, (at locations mentioned above) Hyderabad. Generation of 60(3\*20) kWp of solar based, conversion of the same to AC power with a guaranteed annual generation of 1500 kWh/kWp in a year.

The equipment and materials for 60(3\*20)kWp Solar PV Power Plant with associated system shall include but not be limited to the Design, Supply, Erection, and Testing & Commissioning of the following equipments and sub-systems:

Solar PV modules including mounting frames, Mounting structures, foundation bolts and nuts for holding structures and module inter connection, Array Junction boxes / String combiner Box with surge protection and monitoring system.

Power Control Unit including MPPT and synchronizing facility at 415V, 50Hz

AC Distribution Board

Auxiliary AC & DC power system for control and protection system for the total plant complex.

Plant Monitoring Desk.

Monitoring system for all electrical parameters of the solar PV plant

Protection and Metering system for the complete installation including Meters, Relays and other associated devices

Earthing and Lightning Protection system for the complete installation.

AC/DC Power and Control Cables and accessories. Supply and laying of all power and control cables on wall/ floor etc including supply of hangers, supports, cable terminations, and all fixing accessories.

Nomenclature, Danger Plates, Name Plate, Instructions etc.

Civil works including, foundations.

Supply, installation and testing of entire system including synchronizing with power grid and operation as required. The installation should include electrical switch gears, cabling, terminations, inverters, metering and hooking up the system to the electrical grid. The PV modules shall be installed with the necessary tilt with the most effective orientation.

Onsite training to Midhani personnel for proper operation, maintenance and trouble shooting.

Provision for regular cleaning of Solar Panels considering the ambient conditions of the site.

Water connection at the same floor at each location shall be provided by EMPLOYER.

**Scope of Employer:**

- Site clearing suitable for installing solar array yard and Dewatering system.
- Water connection in the power plant complex at the same floor for periodic cleaning of solar PV modules.
- Necessary power and line facility up to the each plant control room for feeding auxiliary and control power to the entire power plant shall be provided.

**Scope of the successful bidder shall also include:**

- Site inspection and checking of parameters required for design of the system.
- Complete Design, engineering, preparation and submission of drawings, equipment and material specification.
- Procurement and expediting of all supplies and delivery of equipment and material to job site.
- Pre-commissioning & Commissioning of all supplied Equipments and Test running of Grid Connect Solar Power Plants.
- Any other items not specifically mentioned in the specification but which are required for erection, testing and commissioning and satisfactory operation of the solar power plant are deemed to be included in the scope of the specification unless specifically excluded.
- Provision of Safety items like, shock treatment charts, electrical insulation rubber mats, danger/caution boards etc.
- Supply of all commissioning spares and supply of special tools and tackles
- Project management including project administration, project coordination, scheduling, progress reporting to employer.
- Adhering to safety practices during erection, commissioning and subsequent operation and maintenance of the system.
- Training shall be given to Midhani personnel on all the equipments.
- Comprehensive maintenance for Five Years.

**5 SYSTEM PHILOSOPHY AND DESIGN CONSIDERATIONS****System Philosophy**

- The solar power generation system of 60(3\*20)kWp is required to generate a minimum of 90,000 kWh of solar energy in the first year of operation, subject to power outage pattern, site and weather conditions. The bidder shall design the major components and sub-systems accordingly.
- The power generation guarantee has to be done by applying liberal de-rating factors for the array and recognizing the efficiency parameters of PCUs, transformers, etc. The output at Inverter (s) will be considered for verification of power generation.
- The bidder shall study the site condition, estimate/measure solar radiation etc. and shall design as well as size the power plant to achieve the specified annual energy generation in the first year and subsequent years as specified under NMGG clause. He shall use adequate capacity of SPV module, PCUs, Junction boxes etc to ensure generation of power accordingly. Number and rating of solar panels shall be designed accordingly



- The total available Roof Top Area for the project is approximately 900 sqm (north & south blocks), Corporate office approx 300 sqm . **The bidder should visit the site to assess the suitability and sufficiency of the space available for the project before submitting the offer.**
- Number of solar photovoltaic panels shall be decided based on the system rating. The panels shall be connected in arrays and strings. As per design of bidder the SPV array/string may consist of number of SPV modules that directly produces DC electricity power on receipt of solar irradiation. This DC power shall be converted to AC power by requisite designed capacity of inverters.
- The bidder shall design the solar power system in such a way that System controller/MPPT of Inverters have ability to harvest the maximum possible Solar power generation to be exported to the Grid
- The Bidder has to choose solar generation technology using Mono/Poly-Crystalline Silicon Solar Modules manufactured in India of reputed make.
- The design, engineering, manufacture, supply, installation, testing and performance of the equipment shall be in accordance with latest appropriate IEC/Indian Standards as detailed in the relevant MNRE's scheme. Where appropriate Indian Standards and Codes are not available, other suitable standards and codes as approved by the MNRE shall be used.

## 6 SOLAR PV MODULES

### SPV Crystalline modules

- SPV Poly-crystalline modules (**MNRE Approved & Manufactured in India**) to be supplied should have minimum declared output of 250Wp. Number of modules (Approx 240) to be supplied shall be worked out accordingly. The power tolerance of each module shall be  $\pm 5\%$ .

### **The Poly Crystalline PV Solar modules shall comply to IEC 61215**

#### **Solar Photovoltaic module efficiency shall be greater than 15% (to be certified by third party)**

- Module shall have a conversion efficiency of greater than 15 % at Standard test conditions (STC).
- Cells used in offered module should be of reputed make. Photo conversion efficiency of SPV Cell should be greater than 17% at STC.
- The module frame shall be made of aluminum or corrosion resistant material, which shall be electrically compatible with the structural material used for mounting the modules.
- Solar modules offered shall be certified as per IEC 61215 and qualify IEC 61730 and IEC61701 amended up to date or equivalent Standard
- SPV module shall contain mono/poly-crystalline high power silicon solar cells. The solar cell shall have surface anti-reflective coating to help to absorb more light in all weather conditions.
- Solar PV module array shall consist of high efficiency Solar Modules utilizing

mono/Poly Crystalline Silicon Solar PV cells. Individual Solar Module rating shall not be less than 240Wp at Standard test conditions. Bigger watt size Solar PV module will be preferred (more than 240Wp).

- Solar module shall be laminated using lamination technology using established polymer (EVA).
- The solar modules shall have suitable encapsulation and sealing arrangements to protect the silicon cells from the environment. The arrangement and the material of encapsulation shall be compatible with the thermal expansion properties of the Silicon cells and the module framing arrangement/material. The encapsulation arrangement shall ensure complete moisture proofing during life of the solar modules.
- The Module shall be made of high transmittance glass front surface giving high encapsulation gain
- Module rating is considered under standard test conditions, however Solar Modules shall be designed to operate and perform under site condition including high temperature & dust.
- All materials used shall be having a proven history of reliable, light weight and stable operation in external outdoor applications and shall have service life of 25 years.
- Solar PV Module design shall conform to following requirement :
  - Weather proof DC rated MC connector and a lead cable coming out as a part of the module, making connections easier and secure, not allowing for any loose connections.
  - Resistant of water, abrasion, hail impact, humidity & other environment factor for the worst situation at site.
  - The PV junction box shall be IP65 and shall have sufficient bypass diodes to avoid shadowing effects.
- The offered Solar module should give 90% output of rated capacity for first 10 years, 80% output of rated capacity for 25 years.
- The fill factor of module shall not be less than 0.70 (typical).
- The I-V curve of each PV module with Sl. Nos. should be submitted along with Modules meeting the required specifications.

Bidder shall provide data sheet for Solar PV Module (Under Standard Testing Condition) along with their offer.

## **7 MODULE MOUNTING STRUCTURE**

- The Module structure design shall be appropriate and innovative. The bidder may choose to offer module mounting structure as per their design/ economics.
- The module alignment and tilt angle shall be calculated to provide the maximum annual energy output. This shall be decided based on the location of array installation.
- The structure shall be designed to allow easy replacement of any module and shall be in line with site requirement.
- The structures shall be fixed in such a manner that, in future is required they can be easily relocated to a different foundation.
- The mounting structure shall be designed for simple mechanical and electrical installation. It shall support SPV modules at a given orientation, absorb and transfer the mechanical loads to the base properly.

- The mounting steel structure shall be as per latest BIS 2062 (amended up to date) and galvanization of mounting structure shall be in compliance of BIS 4759 (amended up to date).
- The array structure shall be so designed that it will occupy minimum space without sacrificing the output from SPV panels at the same time.
- Nut & bolts, supporting structures including Module Mounting Structures shall have to be adequately protected from atmosphere and weather prevailing in the area.
- All fasteners shall be of stainless steel of grade SS 304.
- The Mounting structure shall be grounded properly using GI strips and maintenance free earthing kit.
- The support structure & foundation shall be so designed to withstand speed for wind zone of the location as given in relevant Indian wind load codes/ standards.
- IS 800-2007 shall be followed for structural design.
- SPV module mounting structure shall be fixed type with provision of manual correction in tilt angle which shall be made after every 3 months to get maximum output.
- Hot dipped Galvanized Steel Structural must be considered for all type of structural steel proposed for the power plant
- Design drawings with material selected shall be submitted for prior approval of the employer.
- The bidder/manufacturer shall specify installation details of the PV modules and the support structures with appropriate diagram and drawings.

## **8 STRING COMBINER BOX OR ARRAY JUNCTION BOXES**

- The junction Boxes shall have suitable arrangement for the followings (typical) :-
  - Combine groups of modules into independent charging sub-arrays that will be wired into the controller.
  - Provide arrangement for disconnection for each of the groups.
  - Provide a test point for each sub-group for quick fault location
  - To provide group array isolation
- The string combiner box/ junction box shall be dust, vermin, and waterproof and made of Polycarbonate Plastic
- The terminal will be connected to copper bus-bar arrangement of proper size to be provided. The junction boxes shall have suitable cable entry points fitted with cable glands of appropriate sizes for both incoming and outgoing cables
- Suitable markings shall be provided on the bus-bars for easy identification and cable ferrules will be fitted at the cable termination points for identification.
- The string combiner box/ junction box shall be with protection class IP 65 for mounting outside in Open weather condition.
- Each string combiner box/ junction box will have suitable Reverse Blocking Diodes of maximum DC blocking voltage of 600V / 1000V, whichever causes less power loss, with suitable arrangement for its connecting
- The string combiner box/ Array junction Box will also have suitable surge protection device.

- The current carrying ratings of the string combiner box/ junction box shall be suitable with adequate safety factor, to inter connect the Solar PV system corresponding to the project capacity, as designed by the contractor

## **9 INVERTERS / POWER CONDITIONING UNIT (PCU)**

- Inverter/PCU shall be centralized grid tied in nature, shall consist of MPPT controller, inverter shall be decided based on array design/suitable rating in case of string design, associated control and protection devices etc all integrated into PCU. It shall provide necessary protections for Grid Synchronization. The Inverters should convert DC power produced by SPV modules in to AC power and must synchronize automatically its AC output to the Grid.
- The DC energy produced has to be utilized to maximum and supplied to the bus for inverting to AC voltage to extract maximum energy from solar array and provides 3-ph, 415V AC/ (+10% to – 10%), 50+/-1.5 Hz with total harmonic voltage distortion less than 3% to synchronize with local grid .
- The Inverters shall be of very high quality having efficiency not less than 97% and shall be capable of running in integrated mode.
- Degree of protection of the indoor Inverters shall be at least IP-42 and that of outdoor at least IP-65.
- Built in with data logging to remotely monitor plant performance through external PC shall be provided (PC shall be provided along with SPV Plant).
- The Inverters should be designed to be completely compatible with the SPV array voltage and Grid supply voltage.
- The dimension, weight, foundation details etc. of the PCU shall be clearly indicated in the detailed technical specification.
- The PCU shall be capable of complete automatic operation, including wake-up, synchronization & shut down independently& automatically.
- Both AC & DC lines shall have suitable fuses & surge arrestors and contactors to allow safe start up and shut down of the system. Fuses used in the DC circuit should be DC rated.
- Inverters/PCU shall operate in sleeping mode when there will no power connected.
- Protections :
  - Over voltage both at input & output
  - Over current both at input & output
  - Over/under grid frequency
  - Heat sink over temperature
  - Short circuit
  - Protection against lightening
  - Surge arrestors to protect against Surge voltage induced at output due to external source
  - Anti- Islanding Protection

- And other required protections

It should have user friendly LED/LCD or touch display for programming and view on line parameters such as:

- Inverter per phase Voltage, current, kW, kVA and frequency,
  - Grid Voltage and frequency,
  - Inverter (Grid) on Line status,
  - PV panel voltage,
  - Solar charge current
  - Individual power stage heat sink and cabinet temperature,
  - Inverter Import export kWh summation
  - Solar kWh summation
  - Inverter on
  - Grid on
  - Inverter under voltage/over voltage
  - Inverter over load
  - Inverter over temperature
- PCU shall be capable to synchronize independently & automatically with grid power line frequency to attain synchronization and export power generated by solar plant to grid.
  - The PCU shall be capable of operating in parallel with the grid utility service and shall be capable of interrupting line fault currents and line to ground fault currents.
  - The PCU shall be able to withstand an unbalanced load conforming to IEC standard (+/-5% voltage) and relevant Indian electricity condition. The PCU shall include appropriate self- protective and self-diagnostic features to protect itself and the PV array from damage in the event of PCU component failure or from parameters – beyond the PCU’s safe operating range due to internal or external causes. The self-protective features shall not allow signals from the PCU front panel to cause the PCU to be operated in a manner which may be unsafe or damaging. Faults due to malfunctioning within the PCU, including commutation feature, shall be cleared by the PCU protective devices and not by the existing site utility grid service circuit breaker.
  - The Inverter shall go to shutdown/standby mode, with its contacts open, under the following conditions before attempting an automatic restart after an appropriate time delay.
    - When the power available from the PV array is insufficient to supply the losses of the PCU, the PCU shall go to standby/shutdown mode.

- The PCU control shall prevent excessive cycling of shut down during insufficient solar radiance.
- Operation outside the limits of power quality as described in the technical data sheet should cause the power conditioner to disconnect the grid. Additional parameters requiring automatic disconnection are
  - Over current
  - Earth fault
  - And reverse power
  - In each of the above cases, tripping time should be very less.
- Detailed technical description of the complete unit of offered Inverter should be furnished with bid document. Following Technical documents of Inverter shall be supplied for approval after placement of order
  - Detailed technical description of the complete unit
  - Instructions for installation and operation
  - Electrical diagrams of all internal cabling necessary for installation, maintenance and fault finding.
  - Description of electrical and mechanical characteristics of units
  - Maintenance and fault finding procedures.
  - Safety precautions
  - Software for data monitoring with detailed description.
  - Details of data acquisition
  - Factory test reports in details on various parameters.
  - Trouble shooting procedures
  - All maintenance requirements and their schedules, including detailed instructions on how to perform each task.
  - Detailed schematics of all power instrumentation and control equipment and subsystems along with their interconnection diagrams. Schematics shall indicate wiring diagrams, their numbers and quantities, type and ratings of alt components and subsystems.
  - A detailed bill of materials which shall list components model numbers, quantities and manufacturer of each supplied item.
  - All documents and write ups shall be in English. They shall be clean and legible, and must be checked, signed, approved and dated by a competent representative of the contractor.
- The Bidder should note that Inverters/PCU is going to be installed in an area which is prone to hot air of 48 to 50 degree centigrade. Thus the room shelter, air blower/ fan

(auto operated as per requirement) if required, for Inverter will be in scope of supply. The Bidder shall provide data sheet for Inverter/ Power Conditioning Unit along with their offer.

- Inverter warranty shall be 5 years
- Standards:  
For Inverter: IEC 61683/IS 61683, IEC 60068-2(1, 2, 14, 30)/ Equivalent BS Std.

For MPPT units IEC 60068-2 (1, 2, 14, 30)/ Equivalent BS Std.

- Qty: 3 Nos of Each 20 KW ( Total 60 KW)
- Make: GE / Siemens / Schneider/ABB/DELTA

## **10 ENERGY METERING**

As per DISCOM rules and specification.

## **11 DATA ACQUISITION AND LOGGING**

- A data acquisition system shall be part of the scope for the Solar PV system. The data logger may be a PC based system or any other intelligent device that communicate to the Central computer over LAN/ WAN. The data logger shall be part of the Power Control Unit or shall suitably communicate with the PCU to fetch all relevant data available in the PCU on real time basis. The Data logger/ Acquisition system shall also communicate with the digital energy meters and receive energy data from the meter through MODBUS Protocol. In addition a suitable instrumentation system shall be provided so that the following data is available to the data logger on a real time basis.
- Readout should be integrated with data logging system. It shall be possible to record and retrieve irradiation and irradiance data hourly, daily, weekly, monthly and yearly.
- The Data acquisition system shall transfer the data to the Central Computer ( Intel i7 series or latest) which shall have the facility of storage ( 1 TB HDD), archiving analysis and display ( 21 inch TFT colour monitor) of the data related to the Solar PV system. Supply of the suitable latest computer and Laser jet printer along with necessary hardware and software shall be part of the scope of supply. The software shall be compatible with any Window based OS.
- Data logger/PC based monitoring system must record all these parameters for study of effect of various environmental & grid parameters on energy generated by the solar system and various analysis would be required to be provided through bar charts, curves, tables, which shall be finalized during approval of drawings.
- Overall it shall be possible to record, archive and display all electrical and environmental parameters in the system for complete monitoring and control of the solar power generation system.
- Make of Computer system: HP / Lenovo / Dell / Acer.

## **12 POWER & CONTROL CABLES:**

- Power Cables of adequate rating and specification shall be supplied and installed for interconnection of :  
Modules/panels within array  
Array & Power Control Unit

Power control Unit to AC distribution board  
AC distribution board PCU  
Evacuation and transmission if required

- The power cables shall be 1.1/1.1 kV grade, heavy duty, stranded copper / Aluminum conductor, PVC insulated, galvanized steel wire/strip armored, flame retardant low smoke (FRLS) extruded PVC type ST-1 outer sheathed. The cables shall, in general conform to IS-1554 Part-I & other relevant standards.
- Control Cables shall be 1.1 kv grades, heavy duty, stranded copper conductor, PVC type A insulated, galvanized steel wire/strip armoured, flame retardant low smoke (FRLS) extruded PVC type ST-1 outer sheathed. The cables shall, in general conform to IS-1554 Part-I & other relevant standards.
- In addition suitable specification instrumentation and communication cables shall be supplied and installed as per design requirement.
- The permissible voltage drop from the SPV Generator to the PCU shall not be more than 2% of peak power voltage of the SPV power source (generating system). In the light of this fact the cross-sectional area of the cable chosen in such that the voltage drop introduced by it shall be within 2% of the system voltage at peak power.
- The permissible voltage drop at AC cables shall not be more than 2 % of peak PCU O/P voltage
- Relevant codes and operating standards shall be followed for selection and installation of all cables.
- Cables shall be laid on air or underground as per the site condition and requirement with proper installation procedures
- Standards: IEC 60227/IS694 & IEC60502/ IS1554 (Pt 1&2)
- Make of Cables: Finolex/ Polycab/Nicco/ Gloster/ Lapp /Advance /KEI.

### **13 AC DISTRIBUTION BOARD/LT INTERFACING PANEL**

- AC Distribution Panel Board (DPB) shall control the AC power from PCU, and should have necessary surge arrestors. Interconnection from ACDB to mains at LT Bus bar to be carried out and complete equipment along with metering for auxiliary consumption to be installed in the ACDB. Requirement/specifications of ACDB may be changed as per site conditions.
- ACDB shall have provision to distribute power to auxiliary loads.
- ACDB shall have required LED indications and front panel display.
- ACDB shall be protected with IP42 protection class in case of indoor and IP65 protection class in case of outdoor.
- All switches at the, circuit breakers, connectors should confirm to IEC 60947, part I, II and III. / IS60947 part I, II and III., EN 50521
- Makes of Major Components: GE/ Siemens/ L&T/Crompton/ Legrand/ ABB.

### **14 EARTHING AND LIGHTNING PROTECTION SYSTEM**

- Necessary system and equipment shall be provided for suitable earthing of the complete system
- Earth bus of SPV Array (if provided) bonded together to prevent the development of potential difference between ant two earths.



- Earth resistance shall not be more than 5 ohms with maintenance free earth pits
- The earthing conductor shall be rated for the maximum short circuit current. The area of cross-section shall not be less than 25 X 3 mm in any case.
- The array structure and PV modules shall be separately grounded properly using adequate numbers of earthing pits. All metal casing/ shielding of the plant shall be thoroughly grounded to ensure safety of the power plant.
- Lightning protection of the solar arrays, transformer and all other outdoor equipment shall be provided as per relevant standards.

## **15 CIVIL WORKS**

This section of the specification covers entire civil engineering work for technological structures, new equipment and facilities for all production, auxiliary and ancillary units, foundation for all structures and main equipment described elsewhere in this specification on a Turnkey basis for installation of the Solar PV power plant.

The scope shall cover complete civil engineering work for the proposed plant within its battery limit, on turnkey basis including design, supply of all materials and execution.

Modules shall be mounted on supporting structure made out of galvanized MS angle of required structural strength. (Hot dip galvanized) either on the roof top or at ground as per the site requirement structure.

## **16 PROJECT SCHEDULE & PROGRESS MONITORING**

Contractor shall submit Overall schedule along with the offer. The overall schedule should be planned in weeks. The heads to be covered in the schedules shall broadly be as follows:

- i. Basic engineering and approval
- ii. Detailed design and engineering
- iii. Submission and approval of drawings for civil & structural works
- iv. Manufacture and supply of all equipment/ piping/ cables, etc
- v. Fabrication and supply of technological structures
- vi. Submission and approval of erection drawings and manuals
- vii. Erection of building and technological structures
- viii. Erection of equipment, piping, cables, etc.
- ix. Testing and commissioning

The major milestones for the project are to be highlighted in the schedule. The contractor shall submit an overall erection plan for the plant and equipment under his scope of supply along with the tender.

The successful contractor shall have to submit the schedule covering details of construction, fabrication and erection activities, area-wise, for approval and finalization of the Employer / Consultant. The format of progress report to be discussed and agreed.

## 17 DRAWINGS, DATA AND DOCUMENTS

The Contractor shall furnish following documents/information along with the offer.

- General description of equipment offered specifying the important features, make, technical parameters, materials of construction, etc. to enable the owner to have proper understanding of the equipment offered and its operation.
- Technical literature of solar panels and Inverters catalogue and publications
- Layout of Complete Power Plant Installation showing location of all major sub-systems
- Single line diagram
- Typical general arrangement and foundation details.

### **Following Documents shall be furnished after award of contract**

The drawings and documents as listed here under shall be furnished by the successful Contractor, for employer/consultants approval within the period stipulated in the draft contract/as mutually agreed at the time of placement of order

- Single line schematic diagram of electrical system for grid interfacing and grid interconnection from Solar plant
- General arrangement drawings and circuit diagrams of Module, Inverters, Transformers, and overall solar plant arrangement
- The contractor shall submit a list of all drawings and documents proposed to be submitted. The list will be approved by employer/ consultant and may be modified if necessary
- Each drawing/ documents in the list shall be identified with a serial number, description and scheduled date of submission.
- Installation, Operation and Maintenance Manuals.
- Type tests certificates of all major equipments like switchgear, Inverters, Solar Modules etc

### **For approval**

- Equipment layout plan
- Single line diagram with rating of all equipment, cable sizes and details of protection and metering
- Front view, general arrangement of equipment with plan and sectional views; clearly showing the position of various components, and clearance between components. The make and type of components, together with vital technical parameters shall also be furnished along with GA drawings
- Control, alarm, indications, interlocking and other schematics
- Lighting layout drawings with illumination levels type and make of fittings.
- Wiring terminal plan drawings with cable connections
- Earthing scheme and layout of earthing network with design calculations, for outdoor switch yard and other areas/premises, if applicable.
- Cable layout drawings, cable channels details

- Installation drawings of all equipment with layout of equipment, cables, lighting systems, (if applicable) and earthing network.

**For Reference**

- Foundation details of each equipment
- Inter panel wiring and terminal block arrangement
- External connection diagram, panel wise and scheme wise

**Instruction Manuals for Operation & Maintenance**

- Complete and comprehensive instruction manuals for operation and maintenance of the equipment with drawings. This shall include the following:
- Preventive maintenance schedule for each equipment
- Procedure for shut down and start-up of the entire power plant
- Safety procedures for safe operation of equipment and complete system
- Specification of equipments installed.
- Test procedure for site tests

Upon installation and commissioning supplier shall incorporate revisions/ modifications if any in the reproducible and submit 'as built' drawings for employer's record as per general condition of contract.

**18 GUARANTEE**

The Contractor will guarantee the equipment for its workmanship, materials, design and satisfactory performance. The Contractor shall be liable to replace any parts/ equipment that may fail or show signs of defects arising from faulty designs, material, or workmanship, erection or from any act of commission of the Contractor. All such replacements shall be made free of cost at site by the Contractor. The contractor shall ensure periodic cleaning and maintenance of solar system during guarantee period their by ensuring specified performance.

All guarantees of materials equipment etc for the entire works as obtained from manufacturers or specialist agencies shall be transferred to the employer by contractor. The system established should be guaranteed for a period of Five years from date of hand over of such successful commissioning.

**19 DELIVERY**

The completion period of the project is limited to 6 months.

**20 INSPECTION**

Manufacturing progress review, inspection & testing of equipment covered under the technical specification shall be carried out by the Employer at the manufacturers' works/premises prior to dispatch, to ensure that their quality & workmanship are in conformity with the contract specifications and approved drawings.

The Contractor shall furnish the quality assurance plan for equipment separately with suggestive stages and hold points for undertaking inspection and testing by the Employer. Total list of plant & equipment of the order shall be submitted to the Employer prior to submission of QAP

The Employer reserves the right to visit at any stage of manufacture of plant and equipment and ask for additional inspection & tests beyond approved QAP, if it is found necessary after completion of detailed design & engineering and approval of drawings

## **21 TESTS**

Following tests shall be conducted on equipment after erection and before energizing from point of view of completeness in the presence of employer:

- Visual inspection of total system
- Checking of continuity of power and control cables.
- Checking of insulation resistance for inter-connected links or cables.
- Checking of protective schemes
- Setting of relays, and the checking of their operation with one lower and one higher setting.
- Checking of control scheme of breakers, etc. as per approved drawings and as per actual requirement
- Checking of name plate data of complete system.
- Verification of earthing resistance.
- Checking of cable terminations and laying, dressing etc.
- Checking for safe accessibility of components.

## **22 INSTALLATION GUIDELINES .**

- The mechanical and Civil installation shall conform to the applicable Acts and Rules of corresponding Inspectorate and other relevant authorities, if any.
- Provision of cable glands, ferrules, cable lugs, tags, sealing kits shall be arranged.
- Supply and installation of first aid boxes, shock treatment charts, rubber mats, and key board etc.
- Erection, testing and commissioning of various equipment shall be done strictly as per manufacturer's instructions.
- Cables shall be laid in conduits as per the electrical installation procedures
- The minimum bending radius of cables shall be 12D and 15D for LT and LT cable respectively.
- Interplant cable shall be laid to trenches, tunnel or overhead structure as per site condition. Digging and refilling of cable trenches, required erection accessories shall be in the scope of work of the contractor.
- Cable shall be fixed to cable racks or cable trays or run on cleats or in conduits, which shall be fixed to concrete brick work or steel structure as required for proper support of the cables, easy accessibility and neatness of appearance.
- Perforated trays shall be provided for control cables.
- Approved type of danger boards, boards inscribing 'ISOLATED', 'DO NOT CLOSE, MEN AT WORK' in English, Telugu, Hindi and Local languages shall be provided in

sufficient numbers.

- Special care shall be taken to make the enclosed equipment protected against entry of rats, lizard, and creeping reptiles which may create electrical short circuits.
- Distinguishing labels of non-corrodible material marked in accordance with the cable numbers of the cabling diagram shall be permanently attached to each end of every cable. The phase or polarity of each power cable core at the cable ends shall be identified.
- Mounting of Inverters, Electrical panels, Dc and Ac junction boxes, Monitoring systems shall be done with proper mounting procedures with neat look.

## **23 ERECTION, TESTING, COMMISSIONING**

The scope of work of the Contractor shall be complete erection of the equipment, cables, auxiliary systems and sub systems under the scope of work. The Contractor shall make all arrangements to deliver the equipment at site for the proper storage of equipment, maintain the stores and all related documents and records, transport the equipment to site for erection purpose. The Contractor also shall make all security arrangements.

- The Contractor shall be responsible for proper, quick retrievable and neat storage and also undertake the conservation of all consignments including damaged boxes. During storage of equipment, the Contractor shall take into account deterioration and carry out the re-conservation of the complete equipment/parts/supplies as may be necessary as per the storage instructions of the Manufacturer of equipment/ components. The Contractor shall also supply the consumables required for such re-conservation work and repair/ replace parts required thereof for the proper functioning of the equipment after erection and commissioning.
- The Contractor shall retrieve the equipment/ materials from stores and transport the same to erection site.
- The Contractor shall unpack and do visual checking against physical damages to the equipment/cases, clean equipment before start of erection. Damage/ shortage, if any, shall be reported to the Employer/ Consultant and shall be rectified/replaced expeditiously, so as not to upset the erection and commissioning schedule.
- The Contractor shall provide all necessary erection equipment and tools & tackles including material handling equipment, cranes, compressors and other equipment and instruments and consumables, all commissioning equipment and instruments, welding equipment, winches, alignment tools, precision levels, etc., which may be required for carrying out the erection and commissioning work efficiently.
- All instruments shall be properly calibrated before use. Unless otherwise specified, the above erection equipment/ materials shall be the property of the Contractor. However, Employer's prior permission shall be required for removal of these erection equipment/ materials from the site. The Contractor shall ensure that proper procedure and documentation is maintained at entry gate of Employer's premises for such items as might be carried back by the Contractor after completion of work.
- The Contractor shall provide erection consumables like oxygen and acetylene gas, welding rods, solder lugs, oil, grease, kerosene, cotton waste, etc. required for erection of equipment and steel structures.

- The Contractor shall construct and maintain his own site offices and stores as required for the work and arrange for maintaining in the area placed at the Contractor's disposal in a neat manner.
- The Contractor shall provide his scheme for mobilization with Bar Chart indicating clearly the resources, manpower and machinery proposed to be deployed to ensure timely completion of work and quality of workmanship
- On request, the Employer may help the Contractor by providing any special handling/construction equipment needed in the interest of work subject to availability. All safety, health and pollution control measures as required to be adopted as per the Statutory Regulations and the Safety conditions for Contractors issued along with the tender or otherwise required or implied by statutory regulations or practices shall be strictly followed by the Contractor during the execution of the Contract. The Contractor shall set up a suitable safety organization of his own at site in this regard.
- Labor facilities such as shelter, food shall be arranged by the contractor.
- The Employer shall deploy/supply Supervising/operating & maintenance personnel, utilities & services required for commissioning.
- The results of pre commissioning Test, start-up tests and commissioning report shall be recorded jointly by the Contractor and the Employer.
- The Contractor shall rectify the defects observed during the Commissioning period promptly.
- **PLANT PERFORMANCE EVALUATION:**  
The contractor shall be required to meet minimum guaranteed generation with Performance Ratio (PR) at the time of commissioning and related Capacity Utilization Factor (CUF) as per the GHI levels of the location during the O&M period.  
PR should be shown minimum of 75% at the time of inspection for initial commissioning acceptance (Provisional Acceptance).  
Minimum CUF of 15% should be maintained for 1 year of defect liability period. The contractor should send the periodic plant output details to MIDHANI for ensuring the CUF. Based on satisfactory performance final acceptance certificate will be issued.  
Also, a minimum CUF of 15% should be maintained for a period of 5 years after 1 year of defect liability period. The contractor should send the periodic plant output details to MIDHANI for ensuring the CUF. The PR will be measured at Inverter output level during peak radiation conditions.
- If the complete system remains synchronized with the grid for a period of 48 hours without any disturbance or interruption it is considered successfully commissioned. During this period the system shall generate power during sunshine hours and export power to the grid and during dark hours shall remain synchronized with the grid. If there is outage isolation from the grid during this period due to defects in the system, then commissioning period shall start afresh after rectification of the said defect.
- The Commissioning and project completion certificate shall be issued by the Employer subject to relevant conditions.

## **24 TRAINING**

Contractor personnel who are experienced instructors and who speak understandable English shall conduct training. The Contractor shall arrange on its own cost all training platform required for successful training and understanding. The Contractor shall provide all necessary training material. Each trainee shall receive individual copies of all technical manuals and all other documents used for training.

The schedule, location, and detailed contents of each course will be finalized during Employer/ Consultant and Contractor discussions.

**Training material shall include**

- Functioning of each and every equipments in the power plant, their circuit diagrams, design and specifications.
- Operation of each and every guidelines and procedure with proper documentation
- Maintenance guidelines and procedure with proper documentation
- Safety and precautionary measures

**25 ELIGIBILITY CRITERIA:**

The bidders shall meet the qualifying requirement stipulated hereunder.

Sl.No	Criteria	Documents to be submitted for confirmation
1.	Should have been established and operating since 3 years. The Bidder should be either a body incorporated in India under the Companies Act, 1956 or 2013 including any amendment thereto and engaged in the business of Solar Power.	Certificate of incorporation issued by the Registrar of Companies with proof of address and stating year of establishment of Bidder
2	Should have carried out EPC of similar type for design, supply, erection and commissioning, Operation & maintenance of solar photovoltaic based grid connected power plant.	Relevant Contract document /Purchase order/Work Order /completion certificate.
3	Minimum one plant of 50 KW capacity or above should have been under operation after commissioning.	Relevant completion/operation certificate of plant being in operation.
4	Should have a minimum annual turnover/ net worth of INR 100 lakhs (INR hundred lakhs) in each of the previous three financial years (FY2013-14,2014-15, 2015-16 )	Audited Annual Accounts.
5	Submission of solvency certificate for Rs. 20 lakhs issued not earlier than 6 months from the date of issue of tender.	Issued by nationalized or scheduled bank of India
6	Should have PAN/TIN/TAN/EXCISE Registration No. /Service Tax Registration No.	Copy of the registration certificates from Bidder.
7	Unconditional Acceptance of all Commercial Terms & Conditions.	Self-certified document.
8	Should have a registered office or business unit within India involved design, supply, erection	Certificate of Incorporation issued by the Registrars of Companies clearly

	and commissioning, operation & maintenance of solar photovoltaic based grid connected power plant(s).	stating the year of establishment
09	Should be MNRE channel partner	Should be MNRE Certified Channel partner.

Bidders who fulfill all the eligibility criteria and accept all the commercial terms and conditions as outlined in this tender shall be considered as eligible bidders

## 26 TECHNICAL CRITERIA

Bidder should supply PV Modules manufactured in India with IEC 61215, 61730 & 61701 certifications.

Panel efficiency should be > 15% (**certificate given by third party is to be enclosed**).

Inverter efficiency should be > 97% (**certificate given by third party is to be enclosed**)

The Company Should be an MNRE Channel partner – proof to be submitted.

Successful Bidder should establish authorized service station in Hyderabad, if not having already. Accordingly under taking is to be given. If already having service station at Hyderabad proof to be submitted.

Certificate to the effect that the Solar PV Modules supplied are indigenously manufactured [India] and not imported. – Proof to be submitted.

Bidders whose Certification/Registration with Govt. of India – MNRE should be valid while tendering and for at least up to the completion of the present work.

All solar panels should have MNRE certification.

## 27 ANNUAL MAINTENANCE CONTRACT (AMC) TERMS & CONDITIONS

AMC will come into effect after successful completion of one year of guarantee period

Comprehensive Annual Maintenance shall be for five years.

Rate shall be for all inclusive upkeep and routine maintenance of complete system for periodic cleaning of PV cells, PCU etc, to ensure committed minimum power generation including all spares, consumables for trouble shooting, preventive and breakdown maintenance as required as per good engineering practices, recommendations of equipment manufacturer and instructions of engineer in charge, in acceptable functional and serviceable state as specified and as per scope of work laid down after defect liability period.

The price of AMC shall be including of all materials.

The rate shall be inclusive of all taxes except service tax.

**CONTRACT RESPONSIBILITY:** The contractor agrees to undertake the maintenance and repairs for the Solar PV Systems installed by them.



**SCOPE OF SERVICES:** The contractor agrees to provide the following services arising out of wear and tear of the normal usage of Solar PV System installed by them:

The AMC will be comprehensive and will include service and cost of spares & Preventive Maintenance.

The vendor's technical service representative shall visit the site once a quarter (minimum) for carrying out preventive maintenance on all the Solar PV System installed by the vendor.

This includes maintenance of all mechanical, electrical and electronic parts / sub-assemblies.

Periodic cleaning of solar panels to ensure efficiency of solar panels is maintained as per specification is also in the scope of contractor.

The preventive maintenance report shall be furnished.

**Breakdown Maintenance:** The Vendor will carry out all breakdown maintenance after receiving information (written or oral) from EMPLOYER officials or their representatives. The Vendor's authorized service representative will carry out the required repairs of the Solar PV System installed by the vendor and inform EMPLOYER office about the status of site. The breakdown maintenance report shall be submitted.

Breakdown maintenance calls shall be attended within a maximum of 24 hours of the receipt of the complaints.

The Vendor shall maintain sufficient spares inventory at their offices in all the Regions. The stock will be in possession / custody of Vendor.

The Vendor shall also obtain all requisite statutory permits/ licenses.

**DURATION OF AGREEMENT:** The agreement shall be in effect for Five years from the date of signing of this agreement and also the expiry of warranty.

The Vendor will submit the following reports every quarter:

Copies of all Preventive Maintenance and Break down Maintenance service reports.

Copies of History sheets of all the systems supplied by them.

Summary of Breakdown and Summary of Preventive maintenance.

AMC scheduler, intimating the dates of visit by service engineer every quarter.

## **28 TERMS AND CONDITIONS**

Payment terms:

60% of the Supply Value along with 100% taxes & duties against receipt after inspection and 30% value of supply after installation and commissioning.

90% Installation and commissioning charges along with 100% taxes & duties on completion of installation and commissioning against indenter's certification(Provisional Acceptance Certificate).

Balanced 10% payment of total order value shall be after successful commissioning and final acceptance of the material at our end and against submission of performance bank guarantee for 10% value of the order valid till guarantee period.

25 % of the yearly Annual Maintenance contract charges after end of each quarter on furnishing of a Certificate from Employer Representative and clearance by Engineer-in-Charge.

Inspection: Inspection will be carried out at contractors site for all bought out items. Test certificates of all bought out items to be provided. All civil works will be inspected at site.

Liquidated Damages: Liquidated damages will be levied against suppliers / contractors in case of unsatisfactory execution of contract or delay in execution of contract beyond the date of delivery / completion of job specified in purchase order/ contract. Ld is leviable @ 1% per week or part there of subject to a maximum of 10% of purchase order / contract price with taxes duties, levies/ cess etc. including erection and commissioning charges.

Submission of Security deposit: For due and faithful performance of purchase order contractor has to submit bank guarantee towards Security deposit with in 15 days from the date of receipt of order for 10% value of the order till acceptance of the Solar Power plant and the same will be returned to the contractor as soon as supplies and jobs specified in the order are completed.

## **29 GENERAL INFORMATION:**

The tender conditions and formats of different forms can be seen in the EMPLOYER web site.

Both the Technical bid and price bid along with original Demand Drafts of bid processing fee, EMD etc., are to be kept in separate cloth covers and are to be sealed. Every cover should bear the tenderers complete address, along with the title of the project such as ***“Design, Supply, Installation, Testing, Erection and Commissioning of 60(3\*20)kWp Grid connected Roof Top Model Solar Photo Voltaic Power Plant aggregated capacity with Five Years of Comprehensive Maintenance Contract”*** All these covers should be kept in a separate big cover and it is dropped in the sealed Tender box at EMPLOYER’s office. Non-submission of any fee/deposit prescribed will attract the rejection clause.

All the tenderers should submit both the bids i.e., technical and price bid in separate covers. Otherwise tender will not be considered.

Price bids of the tenderers who qualify in technical bid will only be opened.

EMPLOYER reserves the right to cancel the tender at anytime without assigning any reasons.

### 30 ANNEXURE-1

#### TECHNICAL BID

**NAME OF WORK :** “Design, Supply, Installation, Testing and Commissioning of 60(3\*20)kWp Roof Top Model Solar Photo Voltaic Power Plant aggregated capacity including Civil works with Five Years of Comprehensive Maintenance Contract”

We confirm the following technical specification.

Sl. No.	Item Description	Confirmation details
1	SPV modules(Manufactured in India as per MNRE specification) for a total capacity of 60(3*20)kWp as per specifications.	
	a) Capacity	
	b) Make	
	c) Module	
	d) No. of SPV Modules	
	e) Efficiency	
2	SPV module mounting structure suitable for accommodating 60(3*20)kWp capacity SPV modules	
3	PCUs as per specifications	
4	Array Junction Boxes	
5	Main Junction Boxes	
6	Data Logging system along with Central computer with remote monitoring as per specification	
7	DC Distribution units as per specifications	
8	AC Distribution units as per specifications	
9	Fire extinguisher in accordance with BIS codes for electrical short circuit fires along with sand buckets	
10	Lightning arrester complete set as per specification	
11	Earthing complete set as per specification	
12	Providing training to engineers and site staff for operating Maintenance and trouble shooting skills	
13	Comprehensive Annual maintenance of Power Plant for a period of 5 years (after Guarantee period).	
14	Operation and maintenance manuals of the SPV Engineering, electrical drawings and installations and O&M manuals.	
15	Any other equipment required to complete the installation	
16	Solar Charge Controller	
17	Power Conditioning Unit (As per design specification given in tender which includes charge controller, inverter & Grid charger. The output power should be on 3 Phase)	
18	Cabling as per specification	
19	Transmission, Distribution & point writing	
20	Monitoring, Control & protection device	
21	Civil works including designs and drawings etc.,	

**Signature of the Bidder with Seal**

**31 ANNEXURE-2**

**PRICE BID**

**NAME OF WORK :** “Design, Supply, Installation, Testing and Commissioning of 100KW Roof Top model Solar Photo Voltaic Power Plant aggregated capacity with Five Years of Comprehensive Maintenance Contract”

The cost of SPV power plant shall includes SPV Power Plant including complete set up in the control room, cost wiring, switches, MCBs, fuse, civil works etc. as per their respective technical specification. The cost details for the plant should be submitted as follows:

Sl. No.	Name of the Work	Capacity	Cost of SPV Power Plant including complete set up. (Cost of Material[A]) + Cost of installation, Erection and commissioning, testing at the site) [B] + Cost of 5 yrs AMC. [C]
1	“Design, Supply, Installation, Testing and Commissioning of 60(3*20)kWp Roof Top model Solar Photovoltaic Power Plants including Civil works with Five Years of Comprehensive Maintenance Contract” <i>As per tender Document</i>		<i>quote separately as [A] + [B] + [C]</i>
	Total Cost :		

Note: Total of A, B, C with taxes and duties will be considered for evaluating L1.

Rupees (in words) .....

**Signature of the Bidder with Seal**

**GENERAL TERMS AND CONDITIONS FOR INDIGENOUS OFFERS**

1. Any Order resulting from this invitation to tender shall be governed by our General Terms and Conditions of Contract and the supplier quoting against this enquiry shall be deemed / to have read and understood the same.
2. Where counter terms and conditions have been offered by the Tenderer, the purchaser shall not be governed by these unless specific acceptances have been given in writing in the order by the Purchaser.
3. The offer should be complete in all respects. Full Particulars and descriptive literature and drawing should be forwarded along with the quotation. The make of the items offered should be clearly specified. Materials should be offered strictly conforming to our specifications. The deviations if any should be clearly indicated in the quotation. Test Certificates must be produced, wherever required. Material conforming to IS will be preferred.
4. **PRICES**  
Price Basis: FOR Midhani, Hyderabad basis.  
The Prices must be per unit shown inclusive of packing forwarding insurance Octroi duty and delivery charges and should be on FOR destination basis, Offers from local suppliers should be for free delivery at our Stores.
5. **TAXES AND DUTIES:**  
The Tenderer shall indicate their Central & State Sales Tax Registration Nos. & date in the quotation.
  - i) If Excise duty or any other charges are payable by the Purchaser, the same must be specifically stated in the offer and payment of such Excise Duty and other duties shall be allowed as applicable at sale point on the production of documentary evidence.  
The Contractor has to furnish transporters copy of Invoice along with supplies for availing Cenvat credit.
  - ii) **SALES TAX:** Sales Tax will be paid by the Purchaser at the sale point if legally leviable at the rate ruling on the date of supply. The percentage of Sales Tax applicable should be indicated. Central Sales Tax will be payable at concessional rates against "C" form on materials covered under Sales Tax Registration.
6. **DELIVERY:**  
Within 6 months from the date of Purchase Order including Erection & Commissioning. Any time attributable to MIDHANI shall be excluded from the Delivery Period.
7. **TERMS OF PAYMENT:**  
**As per Clause 28 of Annexure – I.**
8. **WARRANTY/GUARANTEE:**  
A Guarantee Certificate for the equipment for 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier is to be submitted towards any design, fabrication, workmanship defects etc. in case, any defects are noticed the same should be repaired / replaced free of cost.

9. **TO RECOVER LIQUIDATED DAMAGES:**  
In the event of unsatisfactory, delayed or non supply of materials, the supplier shall be liable to pay by way of liquidated damages at the rate of 1% of the total contract prices per week or part there of subject to a maximum 10% of the contract price without prejudice to the right of the purchaser to take any other action. The amount shall also be recoverable from any other contract on account of the supplier.
10. **RISK PURCHASE:**  
The supply of all items must be completed satisfactorily and within the specified period in the order falling which the Purchaser reserves the right to purchase stores from other sources at the supplier's cost and risk.
11. **PACKING:**  
The stores should be securely packed and properly marked to avoid loss or damage in Transit by Rail / Road.
12. **VALIDITY:**  
THE OFFER SHOULD BE VALID FOR A MINIMUM PERIOD OF 180 DAYS FROM THE OPENING OF QUOTATION.
13. **RIGHT OF ACCEPTANCE:**  
THE PURCHASER DOES NOT BIND HIMSELF TO ACCEPT THE LOWEST OR ANY OF OTHER TENDER AND RESERVES THE RIGHT OF ACCEPTANCE THE WHOLE OR ANY PART OF THE TENDER OR PORTION OF THE QUANTITY OFFERED.
14. **ARBITRATION:**  
Any dispute or difference whatsoever arising between the parties out of or relating to the construction, meaning and operation or effect of this Contract or the breach thereof shall be settled by Arbitration in accordance with the Rules of Arbitration of the Indian Council of Arbitration and the award made in pursuance thereof shall be binding on the parties.
15. **JURISDICTION:**  
All questions, disputes or differences arising under, out of or in connection with the contract shall be subject to the exclusive jurisdiction of court within local limits of Hyderabad, India.
16. **S.S.I. UNITS:**  
**If Tenderer happens to be a SSI Unit with single point registration with NSIC, shall furnish details of turn over besides SSI Registration Certificate Copy along with the Tender. SSI Units seeking exemption from payment of EMD shall furnish necessary documentary proof to the satisfaction of the Purchaser in terms of Government Guidelines.**
17. **MSME UNITS:** Please confirm whether you are MSME UNIT or MSME UNIT owned by SC/ST Entrepreneur.If yes, Please submit latest valid documentary proof for extending benefits as per Government guidelines.
18. **SECURITY DEPOSIT:**  
The successful tenderer shall be required to deposit within two weeks of the acceptance of his tender, Security Deposit of 10% value of Contract in the form of Bank Guarantee. The security deposit shall be for the due and faithful performance of the contract and shall remain binding notwithstanding such variations, alterations or extensions of time as it may be made, given, conceded or agreed to between the Contractor and Purchaser.

The Security Deposit furnished by the successful tenderer will be subject to the Terms & Conditions of the contract finally concluded between the parties and the Purchaser will not be liable for payment of any interest on the security deposit or any depreciation thereof.

The Security Deposit shall be refunded on application by the contractor expiry of the contract period and after he has discharged all his obligations under the contract and produced a certificate from the Purchaser's authorized representatives certifying the due completion & acceptance of the work.

19. **EARNEST MONEY DEPOSIT:**

The tender must be accompanied by an EMD amount of 60,000/- INR in the form of DD drawn in favour of the purchaser through scheduled Bank payable at Hyderabad or Bank Guarantee shall be enclosed with Techno-Commercial Bid.

Tenders not accompanied by Earnest Money Deposit will be liable for rejection. The earnest money shall be kept deposited for 180 days. The Earnest Money will not earn any interest. If the tenderer after submitting his tender and during the tender's validity period, resiles from his offer or modifies the terms and conditions thereof in a manner not acceptable to the Purchaser, the earnest money shall be liable to be forfeited.

On the acceptance of the tender, but not earlier than the expiry date of the period for which the tender is kept open, the earnest money will be returned to the unsuccessful tenderers. Should an Invitation to tender to be withdrawn or cancelled by the Purchaser, which it shall have the right to do at any time, the earnest money paid with the tender will be returned.

On the tender being accepted by the Purchaser, if so, required by the Purchaser as its option an agreement in respect of the Contract will be signed and executed by and between the Purchaser and the successful tenderer. Should the successful tenderer, upon the acceptance of his tender, fail or refuse to duly sign the agreement within the period fixed by the Purchaser as indicated above, the earnest money shall be forfeited without prejudice to his being liable for any further loss or damage incurred in consequence by the purchaser.

The Earnest Money shall be returned to all the firms after finalization of the tender. EMD of successful tenderer shall be returned after submission of Security Deposit.

20. **ADDENDA TO TENDER DOCUMENTS:**

The Purchaser reserves the rights to issue addenda to the tender documents to clarify, modify, supplement or delete any of the condition, clauses or items stated in the tender documents issued with this Invitation to Tender. Each addendum issued shall form a part of the original tender documents to be reviewed as required.

21. **QUERIES / CLARIFICATIONS:**

Queries / clarifications, either technical, financial or commercial, if any, that may arise, should be referred by the tenderer by fax / letter direct to the Dy. Manager (Purchase), Mishra Dhatu Nigam Limited, PO Kanchanbagh, Hyderabad – 500 058 (Fax No. 040-24340764). For Technical queries, contact Shri D Ravinder, DGM (Elec.). email: dravinder@midhani.com.

22. **NO CLAIM OR COMPENSATION FOR SUBMISSION OF TENDER:**

The tenderers whose tenders are not accepted shall not be entitled to claim any costs, charges and expenses of the tender, incidental to or incurred by them, through or in connection with their submission of tenders even though the Purchaser may elect to withdraw the invitation to tender.

23. LOWEST TENDER NOT NECESSARY TO BE ACCEPTED:

The Tenderers whose tenders are not accepted shall not be entitled to claim any costs, charges and expenses of the tender, incidental to / or incurred by them, through or in connection with their submission of tenders, even though the Purchaser may elect to withdraw the Invitation to Tender.

24. BANKRUPTCY ETC.:

If the Contractor shall become bankrupt or insolvent or cause or suffer any receiver to be appointed of his business or any asset thereof or compound with his creditors, or being a corporation commence to be wound up, or carry on its business under a Receiver for the benefits of its creditors or any of them, the Purchaser shall be at liberty:

- a. To terminate the contract forthwith upon coming to know of the happening of any such event as aforesaid by notice in writing to the Contractor or to the receiver / liquidator.

OR

- b. To give such receiver, liquidator or other person the option of carrying out the contract subject to his providing guarantee up to an amount to be agreed for the due and faithful performance of the Contract.

25. SUBMISSION OF TENDER:

Tenders shall be sent by registered post or put in personally in the sealed Tender Box located at the Corporate Security Gate of Midhani. The Tender cover shall superscribe our Tender Number and due date.

The tenders received after the stipulated time (11:00 hrs IST) and due date, due to any reason whatsoever will not be considered.

26. MODE OF SUBMISSION OF TENDER:

Tenders shall be submitted as per the procedure indicated at Annexure - III.

Tenderers are required to submit their tenders in two parts, namely:

1. Part I: Techno-commercial Bid (un-priced) along with DD / Bank Guarantee for Rs. 60,000/- (Rupees Sixty Thousand only) towards Earnest Money Deposit
2. Part II: Price Bid.

**EMD:** (Envelope No. 1(a)), in the form of Demand Draft or Bank Guarantee should be submitted separately superscribing as "EMD" indicating the tender No. & due date of opening, duly sealed and kept in Envelope No: 1(a). Offers received without EMD will be summarily rejected.

**Techno-commercial (Un-priced) Bid:** (Envelope No. 1(b)), detailed technical specifications should be furnished along with catalogue / literature of original manufacturer and submitted separately superscribed as "Techno-commercial Bid" (un-priced) including Commercial Terms indicating the tender No. & due date of opening duly sealed and kept in Envelope No. 1(b).



**Price Bid:** (Envelope No.2), the priced offer / quotation should be submitted separately superscribed as "Price bid" (envelope no.2) indicating the Tender No. & Due Date of opening duly sealed and kept in Envelope No.2.

All the three Envelopes should be kept in envelop No. 3 and which also should be superscribed with the tender No. & date of opening.

The above is further explained in greater detail in Annexure - III.

Techno-commercial Bids (un-priced) & price bids of tenderers received without EMD will be summarily rejected. Unsealed tender, unsigned tenders, tenders who are incomplete or otherwise considered defective are liable to be rejected. Any bid not confirming to above shall be summarily rejected.

27. TENDER OPENING:

A) TECHNO-COMMERCIAL BIDS (UN-PRICED) :

Techno-commercial Bids (un-priced) only shall be opened on the due date indicated in the enquiry in the presence of Tenderers or their authorized representatives who choose to be present at the time of tender opening.

B) PRICE BIDS:

PRICE Bids of technically acceptable tenders' shall be opened after the Techno-commercial bids evaluation and after receipt of clarifications, if any, in the presence of tenderers or their authorized representatives who choose to be present at the time and date which will be informed to the tenderers concerned in advance.

The comparative assessment of offers received would be made on equal footing taking into account the financial implications for the deviations in terms and conditions. Conditional discounts offered by the tenderers for coverage within a shorter period for early inspection / payment etc., shall not be considered at the time of evaluation of tenders.

28. DEFINITIONS:

PURCHASER:

The term "Purchaser" as used herein shall mean Mishra Dhatu Nigam Limited, incorporated under the Companies Act, 1956, and having its registered office at P.O. Kanchanbagh, Hyderabad - 500 058, India, and shall include its successors and assigns.

TENDERER:

The term "Tenderer" shall mean the person, firm or corporation submitting a tender against the Invitation to tender and shall include his/its heirs, executors, administrators, legal representatives, successors and assigns.

CONTRACTOR:

The term "Contractor" shall mean the Tenderer whose tender has been accepted and shall include his/is heirs, executors, administrators, legal representatives, successors and assigns approved by the Purchaser.

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**GENERAL TERMS & CONDITIONS FOR IMPORT OFFERS**

**1. IMPORTANT DETAILS :**

The tenderer shall indicate/furnish the following in his offer:

- i. Manufacturer's Name & Address.
- ii. Country of origin of goods.
- iii. Delivery period.
- iv. Mode of packing.
- v. Net weight and Gross weight.
- vi. Technical Literature / Catalogue.
- vii. Details of Shelf life, if any, applicable for the goods offered.
- viii. FOB/FAS prices indicating port of loading.
- ix. Your Banker's Name & Address.
- x. A confirmation that the price quoted is your lowest export price and is the same as you would normally quote to Government department and other favored customers.
- xi. TARIFF HEAD UNDER H. S. (HARMONISED SYSTEM).

**Note:** Tenders received without the above details are liable to be rejected summarily.

**2. CREDIT RATING CERTIFICATE:**

- a) Tenderers shall furnish credit rating obtained by them from any reputed credit rating agency along with offer.
- b) DEALERSHIP CERTIFICATE :  
Dealers/Stockists traders shall furnish dealership certificate along with offer.

**3. AGENCY COMMISSION :**

We are a Government of India Enterprise. It is our policy to deal with the foreign suppliers/manufacturers directly without associating any of their Indian agents or payment of any agency commission. You are therefore requested to quote your price without any agency commission, passing on this benefit to the Purchaser which is Government of India Enterprise. Please therefore specifically state in your offer that the price quoted by you is net and NO agency commission is payable to any Indian agent.

**4. VALIDITY :**

The offer shall be valid for a period of 180 days from the date of tender opening.

**5. PRICES :**

Preference will be given to FIRM prices, but should the quoted prices be subject to variation, the price variation clause should be detailed in the offer.

- i. Customs Tariff Code for various components shall be indicated in the offer.
- ii. Offers in Foreign Currencies shall be normally on FOB basis. However, in case any other Terms as per INCOTERMS are quoted, FOB price must be indicated. MIDHANI shall reserve the right to place order on either FOB or other Terms as per INCOTERMS.

- iii. Indicate whether the shipment shall be FCL (Full Container Load) or LCL (Low Container Load) and number of containers in the techno-commercial bid. In case the same is not feasible, indicate the volume and weight of the consignments.
- iv. Exchange rate for the foreign currencies shall be considered as on final scheduled techno-commercial bid opening date. Exchange rate shall be taken from the website of RBI.
- v. Landed Costs shall be calculated on FOB Costs considering the following:
  - a. Freight, Insurance and Clearance Charges (as per the port of Loading) till receipt of material in MIDHANI.
  - b. Duties applicable after considering CENVAT benefits.
  - c. Interest Charges for normalizing payment terms (if any), based on State Bank of India (SBI) cash credit rate as on techno-commercial bid opening date.
  - d. LC charges prevailing as on techno-commercial bid opening date as per SBI taking into account the Delivery Period.
  - e. Pre Dispatch Inspection/Training Charges, if any, for Inspection by MIDHANI.
- vi. Freight charges whichever is lower either (i) from offer, In case of other than FOB price or (ii) our internal prices in case of FOB Price, shall be considered.

**6. DISCOUNT :**

Prices quoted should be applicable to purchases by Manufacturers and the manufacturer's discount, if any, should be indicated in the offer.

**7. DESCRIPTION & SPECIFICATION :**

The description and specification offered in the offer will be binding on the Tenderer and no alteration thereof will be permitted.

**8. PURCHASER'S RIGHT :**

The purchaser reserves the right to reject or to accept any Tender, either in full or in part, without assigning any reasons whatsoever.

**9. TO RECOVER LIQUIDATED DAMAGES:**

In the event of unsatisfactory, delayed or non supply of materials, the supplier shall be liable to pay by way of liquidated damages at the rate of 1% of the total contract prices per week or part there of subject to a maximum 10% of the contract price without prejudice to the right of the purchaser to take any other action. The amount shall also be recoverable from any other contract on account of the supplier.

**10. AUTHORITY TO SUBMIT TENDER :**

The signatory to the Tender will be deemed to have the authority to submit the Tender. The Tender will be binding on the tenderer and no alteration will be permitted.

**11. TERMS & CONDITIONS OF TENDER :**

Any Purchase Order placed against the offer against this Invitation to Tender shall be subject to the General Conditions of this Invitation to Tender.

**12. Terms of payment:**

**As per clause 28 of Annexure – I.**

**12.1. Documents required for payment against Supply:**

The tenderer shall be confirming that in the event of order that the following documents will be furnished for each lot / consignment for purposes for payment:

- a. Clean on Board Bill of Lading as defined in Incoterms 2010. – 2 negotiable and 2 non negotiable copies
- b. Signed Invoice for the goods dispatched. - 4 copies
- c. Certificate of Origin. – 2 copies
- d. Packing List. – 5 copies
- e. Test / Manufacturer's Certificate. – 4 copies
- f. Fax intimation particulars regarding shipment sent to our insurer – 2 copies

**12.2. Documents required for claiming balance payment:**

- a. Acceptance certificate issued by Midhani in original.
- b. NOC from Midhani for releasing balance payment after recovery if any.
- c. Performance Bank Guarantee for 10% Order Value valid till Guarantee Period.

Note: Bank Guarantees shall be confirmed through SBI, Frankfurt/ SBI, Newyork / any Nationalised bank or Scheduled Bank encashable in India. BGs shall have an additional claim period of Three months.

**12.3. Taxes & Duties:**

All statutory customs/import duties, taxes, fees, cess & levies, etc. in India on the imported goods on amount payable in foreign currencies shall be borne and paid by the Purchaser.

Income tax (Withholding Tax) in India, if leviable and other taxes in relation thereto on any other account shall be borne and paid by the successful Supplier. The successful supplier shall be liable to file tax returns with respective income tax authorities as required under the Indian Income Tax Act.

All payments under the Purchase Order to the successful tenderer shall be subjected to deduction of taxes at source at the applicable rates in force as per the provisions of the Indian Income Tax Act or Double Taxation Avoidance Treaty whichever is more beneficial to the tenderer. Where the benefits of double taxation are to be availed, it shall be the responsibility of the tenderer to furnish the Tax Residency Certificate to the Purchaser required under the Indian Income Tax Act.

**13. ARBITRATION :**

Any dispute relating to construction, meaning and operation or effect of this contract or breach thereof shall be settled by Arbitration in accordance with the Rules of Arbitration of the Indian Council of Arbitration and award made in pursuance thereof shall be binding on the parties.

**14. JURISDICTION :**

All questions, disputes or differences arising under, out of or in connection with the contract shall be subject to the exclusive jurisdiction of court within local limits of Hyderabad, Andhra Pradesh, India.

**15. WARRANTY/GUARANTEE:**

A Guarantee Certificate for the equipment for 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier is to be submitted towards any design, fabrication, workmanship defects etc. in case, any defects are noticed the same should be repaired / replaced free of cost.

**16. INSURANCE :**

Marine Insurance Coverage will be arranged by the Purchaser hence tenderers should quote only FOB/FAS Price.

**17. PRICE NEGOTIATIONS :**

Price Negotiations as such shall not be held, except in the case of Negotiations with the lowest tenderer and accordingly, the tenderers shall have to submit their best commercial bids.

**18. EXPORT LICENCE :**

Restrictions if any, for exporting this item to Midhani, India may please be indicated specifically with regard to time required for executing the order as per the quoted delivery schedule.

**19. PACKING :**

The material should be securely packed and properly marked to avoid Loss & Damage in Transit.

**20. SECURITY DEPOSIT :**

The successful tenderer shall be required to deposit within two weeks of the acceptance of his tender, Security Deposit of 10% value of Contract in the form of Bank Guarantee. The security deposit shall be for the due and faithful performance of the contract and shall remain binding not withstanding such variations, alterations or extensions of time as it may be made, given, conceded or agreed to between the Contractor and Purchaser.

The Security Deposit furnished by the successful tenderer will be subject to the Terms & Conditions of the contract finally concluded between the parties and the Purchaser will not be liable for payment of any interest on the security deposit or any depreciation thereof.

The Security Deposit shall be refunded on application by the contractor expiry of the contract period and after he has discharged all his obligations under the contract and produced a certificate from the Purchaser's authorized representatives certifying the due completion & acceptance of the work.

**21. EMD CLAUSE :**

All bidders shall submit an EMD amount equivalent to INR 60,000/USD 900 in the form of DD through Scheduled Bank payable at Hyderabad or Bank Guarantee shall be enclosed with Techno-Commercial Bid. If EMD is not found enclosed, such offers would be liable for rejection. Bank Guarantee shall be valid for a period of 180 days.

**22. ADDENDA TO TENDER DOCUMENTS :**

The Purchaser reserves the rights to issue addenda to the tender documents to clarify, modify, supplement or delete any of the condition, clauses or items stated in the tender documents issued with this invitation of Tender. Each addendum issued shall form a part of the original tender documents to be reviewed as required.

**23. DELIVERY:**

Within 2 months from the date of Purchase Order.

**24. QUERIES/CLARIFICATION:**

Queries/Clarifications, either technical, financial or commercial, if any, that may arise, should be referred by the tenderer by Fax/Letter direct to the Dy. Manager (Purchase), Mishra Dhatu Nigam Limited, Hyderabad – 500 058 (FAX : 040 – 24340764). For Technical queries, contact Shri D Ravinder, DGM (Elec.). email: [dravinder@midhani.com](mailto:dravinder@midhani.com)

**25. NO CLAIM FOR COMPENSATION FOR SUBMISSION OF TENDER :**

The tenderers whose tenders are not accepted shall not be entitled to claim any costs, charges and expenses of the tender, incidental to or incurred by them, through or in connection with their submission of tenders even though the Purchaser may elect to withdraw the invitation to tender.

**26. LOWEST TENDER NOT NECESSARY TO BE ACCEPTED :**

The tenderers whose tenders are not accepted shall not be entitled to claim any costs, charges and expenses of the tender, incidental to or incurred by them, through or in connection with their submission of tenders even though the Purchaser may elect to withdraw the invitation to tender.

**27. MODE OF SUBMISSION OF TENDER :**

Tenders shall be submitted as per the Procedure Indicated at Annexure.

Tenders are required to submit their tenders in two parts, namely:

1. Part – I: Techno-Commercial Bid (Un-Priced) with EMD.
2. Part – II: Price Bid.

Techno-Commercial (Un-Priced) Bid : (Envelope No. 1), Detailed Technical Specifications should be furnished along with Catalogue/Literature of original manufacturer and submitted separately superscribed as “Techno-Commercial Bid” (Un-Priced) including Commercial conditions indicating the Tender No. & Due date of opening duly sealed and kept in Envelope No. 1.

PRICE BID: (Envelope No. 2), The Priced Offer/Quotation should be submitted separately superscribed as "Price Bid" (Envelope No. 2) indicating the Tender No. & Due date of opening duly sealed and kept in Envelope No. 2

All the two Envelopes should be kept in Envelope No. 3 and which also should be superscribed with the Tender No. & Due date of opening. The above is further explained in greater detail in Annexure-IV.

Unsealed Tender, Unsigned Tenders, Tenders who are incomplete or otherwise considered Defective are liable to be rejected. Any bid not confirming to above shall be summarily rejected.

**28. TENDER OPENING :**

**A) TECHNO-COMMERCIAL BIDS (UN-PRICED) :**

Techno-Commercial Bids (Un-Priced) only shall be opened on the due date indicated in the Enquiry in the presence of Tenderers or their authorized representatives who choose to be present at the time of Tender opening.

**B) PRICE BIDS :**

Price Bids of technically acceptable tenders' shall be opened after the Techno-Commercial Bids evaluation and after receipt of clarifications, if any, in the presence of tenders or their authorization representatives who choose to be present at the time and date which will be informed to the tenderers concerned in advance.

The comparative assessment of offers received would be made on equal footing taking into account the Financial Implications for the deviations in Terms & Conditions. Conditional discounts offered by the tenderers for coverage within a shorter period for early inspection/payment etc., shall not be considered at the time of evaluation of tenders.

**29. DEFINITIONS:**

**PURCHASER:**

The term "Purchaser" as used herein shall mean Mishra Dhatu Nigam Limited, incorporated under the Companies Act, 1956, and having its registered office at P. O. Kancharbagh, Hyderabad – 500 058, India and shall include its successors and assigns.

**TENDERER:**

The term "Tender" shall mean the person, firm or corporation submitting a tender against the Invitation to tender and shall include his/its heirs, executors, administrators, legal representatives, successors and assigns.

**CONTRACTOR:**

The term "Contractor" shall mean the Tenderer whose Tender has been accepted and shall include his / its heirs executors, administrators, legal representatives, successors and assigns approved by the Purchaser.

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**PROCEDURE TO BE FOLLOWED FOR SUBMISSION OF TENDER:**

**ENVELOPE NO.1:**

PART - I "TECHNO- COMMERCIAL BID"

TENDER FEE & EMD ENQUIRY NO. MDN/PUR/1960057/CG/ADVT/233/16-17

DATE: 02/01/2017

DUE DATE : 20/01/2017 @ 1100 HRS.

To

THE ADDL. GENERAL MANAGER (PURCHASE)

MIDHANI, HYDERABAD - 500 058.

NAME OF THE TENDERER:

**ENVELOPE NO.2:**

PART - II "PRICE BID"

ENQUIRY NO. MDN/PUR/1960057/CG/ADVT/233/16-17

DATE: 02/01/2017

To

THE ADDL. GENERAL MANAGER (PURCHASE)

MIDHANI, HYDERABAD - 500 058.

NAME OF THE TENDERER:

PLEASE PUT ALL THE THREE ENVELOPES IN A BIGGER SIZE ENVELOPE:

**ENVELOPE NO: 3:**

TENDER NO.

ENQUIRY NO. MDN/PUR/1960057/CG/ADVT/233/16-17

DATE: 02/01/2017

DUE DATE : 20/01/2017 @ 1100 HRS.

CONTENTS:

- 1) TECHNO-COMMERCIAL BID WITH EMD
- 2) PRICE BID

To

THE ADDL. GENERAL MANAGER (PURCHASE)

MISHRA DHATU NIGAM LIMITED

PO: KANCHANBAGH,

HYDERABAD - 500 058.

NAME OF THE TENDERER:



BANK GUARANTEE FOR EARNEST MONEY DEPOSIT

1. WHEREAS MISHRA DHATU NIGAM LIMITED (A GOVERNMENT OF INDIA ENTERPRISE) PO KANCHANBAGH, HYDERABAD (hereinafter referred as " The Owner / Company" which expression shall unless repugnant to the subject or context includes its legal representatives, successors and assigns) has issued tender paper vide its Tender No: \_\_\_\_\_ for supply of \_\_\_\_\_ (herein after called "the said tender") to M/s. \_\_\_\_\_ (herein after called "the said Tenderer(s)" which expression shall unless repugnant to the subject or context includes their legal representatives, successors and assigns) and as per terms and conditions of the said tender, the tenderer shall submit a Bank Guarantee for Rs./USD \_\_\_\_\_ towards earnest money in lieu of cash.
  
2. WE (Bank Name and Address) (herein after called the bank) do hereby undertake to pay the amount due and payable under this Guarantee without any demur merely on a demand from the company stating that in the opinion of the company, which is final and binding, the amount claimed is due because of any withdrawal of the tender or any material alteration to the tender after the opening of the tender by way of any loss or damage caused or would be caused or suffered by the company by reason of any breach by the said tenderer(s) of any of the terms and conditions contained in the said tender or failure to accept the Letter of Intent / Agreement or that the amount covered under this Guarantee is forfeited. Any such demand made on the bank by the owner shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs./USD \_\_\_\_\_.
  
3. We undertake to pay to the Company any money so demanded notwithstanding any dispute or disputes raised by the tenderer(s) in any suit or proceeding pending before any office, court or tribunal relating thereto, our liability under this present guarantee being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder. Our liability to pay is not dependant or conditional on the owner proceeding against the tenderer.
  
4. The guarantee herein contained shall not be determined or affected or suspended by the liquidation or winding up, dissolution or change of constitution or insolvency of the said tenderer(s) but shall in all respect and for all purposes be binding and operative until payment of all money due or liabilities under the said tender are fulfilled.
  
5. WE (Bank Name and Address) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the finalization of the said tender and that it shall continue to be enforceable till the said tender is finally decided and order placed on the successful tenderer(s) and /or till all the dues of the company under/or by virtue of the said tender have been fully paid and its claims satisfied or discharged or till a duly authorized officer of the company certifies that the terms and conditions of the said tender have been fully and properly carried out by the said tender(s) or till date: \_\_\_\_\_ whichever is earlier and accordingly discharges the guarantee.

6. That the Owner/Company will have full liberty without reference to us and without affecting this guarantee to postpone for any time or from time to time, the exercise of any of the power of the owner under the tender.
  
7. We (Bank Name and Address), lastly undertake not to revoke this guarantee during its currency except with the previous consent of the company in writing. We further undertake to keep this Guarantee renewed from time to time on the request of the Tenderer(s).
  
8. Notwithstanding anything contained herein before, our liability shall not exceed Rs./USD\_\_\_\_\_ towards earnest money in lieu of cash and shall remain in force till (date). Unless a demand or claim under this Guarantee is made on us within three months from the date of expiry i.e., \_\_\_\_\_ we shall be discharged from all the liabilities under this guarantee.

Date: \_\_\_\_\_ (Bank Name and Address)

Signature of duly

Authorized person

On behalf of the Bank

With seal & signature code