

OFFICE OF THE PRINCIPAL
NAYAGARH AUTONOMOUS COLLEGE,
NAYAGARH (ODISHA) – 752 069

Phone : (06753) 252234 (O) 252235 (R) Fax : 06753-253480
www.ngrautocol.ac.in e-mail : ngrautcol@yahoo.co.in


No 2512

Date 14-12-20

Sealed quotations are invited from the registered firms/Authorised Dealers having valid GST, PAN & IT clearance for procurement of the following items from assistance for non-civil expenses under OHEPEE scheme, Govt. of Odisha.

SI No	Item Name	Description	Remarks
1	Street Lights	24 watts	
2	Solar Water Heating system	200 LPD capacity	
3	Execution of 3 kw Grid connected Roof top Solar PV System including Design, Supply, Errection, installation with existing electrical system, Parralling/ synchronizing with E Board, Commissioning, performance Guarantee, handing over Annual maintaince.	Details Specification Shown below as Annexure	

The sealed quotations marking on the cover 'QUOTATIONS' should reach the office of the undersigned on or before 24th Dec, 2020 through Registered/Speed Post. The Authority reserves the right to reject or cancel any or all quotation without assigning any reason thereof.


14.12.2020
(SRI S K PRADHAN)
PRINCIPAL
PRINCIPAL
NAYAGARH AUTONOMOUS COLLEGE
NAYAGARH

Annexure-I

SPECIFICATION FOR SOLAR ROOFTOP PHOTOVOLTAIC SYSTEM WITH GRID CONNECTIVITY

Design of the System

Design of the installed PV system shall serve the following three purpose in the stated order.

1. Primarily the system will fulfil the minimum power requirement of the COLLEGE such as of electrical appliances (Fans, Tubes, Bulbs Etc.).
2. Upon fulfilling the both the above requirement, the system should evacuate the surplus power to the GRID (net metering).
3. All approved design standards as per OERC should be followed in case for compliance and DISCOM approvals required to be submitted with SLD.

The components of the system will included Solar PV modules ,mounting structures ,Inverter, Earthing Set, Lightening arrester ,wires and cables, Import-Export Meter (as per requirement of state DISCOM), Liosioning with DISCOM etc.

Technical Specification.

3.1 SPV Modules.

- I. The manufacturer /supplier should preferably be an OREDA/MNRE (Odisha Renewable Energy Development Agency) approved manufacturer / supplier.
- II. The minimum capacity of the SPV array shall be 3 KWp.
- III. Mono/poly Crystalline type SPV modules of desired nominal voltage or peak power rating which meet specifications shall be supplied
- IV. Modules shall be supplied with a warranty that fabrication is in compliance with the standards approved by MNRE.
- V. Offered module shall have a power output warranty for 25 years.
- VI. Solar cells/modules used should have a proven record for the performance in actual field conditions.

3.2 Mechanical Components

a) Array Support Structure

- i. SPV modules shall be mounted on a non-corrosive support structure suitable for site conditions.
- ii. The inclination angle of the array support structure shall be in accordance with the site condition and latitude of the place of installation.
- iii. There shall be Galvanized mild steel frame structures for holding the SPV modules.

- iv. Each panel frame structure shall be so designed for Non-invasive type for rooftop application.
- v. Each panel frame shall be complete with a weather proof junction box as per the relevant ISI specifications, where the module terminals shall be interconnected and output taken.
- vi. The panel frame structure shall be capable of withstanding a wind load of 150 Km. Per hour after installation.

3.3 Electrical

a. Inverter

The inverter shall convert DC Power produced by SPV array into AC power.

- I. Primarily inverter shall supply power to load. The surplus or in no load condition excess power shall be exported to grid through net-metering as per Discom policy of ODISHA.
- II. Inverter must have facility of data logging and a remote monitoring system.
- III. The data may be shared with EIA, NDDDB, and DCS through Web /mobile applications or email alerts.
- IV. Vendor must incur the cost related remote monitoring at least for one year from commissioning of the system.

b. Cables

- i. Cabling will be carried out as per Indian Electricity (IE) Rules 1956 and ISI marked.
- ii. Cable marking: All cables /wires shall be market with good quality ferule.
- iii. Cable Ends: All connections shall be made through suitable cable lugs/tags crimped properly and with the use of cable glands. All cables shall conform to BIS standards.

c. Lighting protection

- i. The suitable lightning arrestors (ESE) installed in the array area.
- ii. Lightning protection be provided by the use of metal oxide arrestors and suitable earthing such that induced transients find an alternate route to earth.
- iii. Protection shall meet the safety rules as per Indian Electricity Act 2003/IE rules.

d. Earthing Protection

- i. Each array structure of the PV Yard shall be grounded /earthed properly.
- ii. Provision shall be kept for shorting and grounding of the PV array at the time of maintenance work.
- iii. All metal casing /shielding of the plant be thoroughly grounded in accordance with Indian Electricity Act/ IE Rules.

e. Surge Protection

- i. Appropriate Surge protection must be provided in the system.

f. Adhering to state Policy and rules of DISCOMs.

- i. System must adhere to the state solar policy and rules and regulations of state DISCOMs. All the safety measures as defined in the policy and rules.
- ii. Rs.100,000/- may be deducted and only be claimed by the vendor upon submission of proof of Grid connectivity in terms of power purchase agreement with DISCOM and relevant electricity bill (may be released in case all documents pertaining to Net metering are over).
- iii. Vendor supplying the system must provide the service for One year of whole system on comprehensive basis.
- iv. Vendor will ensure GRID connectivity of the system approaching DISCOM and concerned state departments and fulfil the necessary requirements. EIA and the beneficiary DCS will provide all the necessary support to Vendor for GRID connectivity in terms of documentary support, facilitating site inspections etc.

