

Ref No. INKEL/RED/2022-23/NIQ-SPV panels-220KWp Tvm District panchayat/01
Date:30.11.2022

Notice for Inviting Quotations

INKEL Ltd. Invites sealed quotations from financially and technically sound reputed suppliers for the Supply of MonoPERC Bifacial Glass to Glass PV modules with frame of capacity 540Wp or above at 3 site locations in Thiruvananthapuram District, Kerala.

Name of Work	Quotations invited for Supply of MonoPERC Bifacial Glass to Glass PV modules with frame of capacity 540Wp or above at 3 site locations in Thiruvananthapuram District, Kerala.
Date of publishing bid documents	30.11.2022
Last Date & Time of Submission of Quotation document	12.12.2022,3:00PM
Opening of Quotation Cover	12.12.2022,04:00PM
Nature of Contract	Supply
Time of Completion of Supply	21 Days from the Date of PO

Eligibility Criteria

The bidder must fulfil the following eligibility criteria.

- a) The bidder must be a firm registered under GST.
- b) The bidder must be OEM manufacturer or Authorised Distributor.
- c) The bidder must supply the minimum quantity of 2MWp Glass to Glass Bifacial Modules. (Proof to be attached)

The Scope of Supply & Technical Specifications to be followed is scheduled in Appendix – 1

All the Quotation documents are to be submitted by Speed post only and in the designated covers on the below address by mentioning name of work.

**To,
Managing Director
INKEL Limited, Door No. 7/473ZA – 5 & 6,
1st Floor, Ajiyal Complex, Kakkanad, Cochin, Pin: 682030**

Note: Please sign and seal all the pages in the Notice Inviting Quotation and return the same.

The quotation shall be valid for 120 days reckoned from the date of opening of quotation. No correspondence would be made with the bidders once the quotation is submitted. The decision taken in the INKEL Committee will be final.

INKEL Ltd reserves the right to modify/cancel any or all quotations without assigning any reasons.

Further details can be had from the office of the General Manager – Renewable Energy Division, INKEL Limited, Door No. 7/473ZA – 5 & 6, 1st Floor, Ajjyal Complex, Kakkanad, Cochin, Pin: 682030 Phone: 0484-2978101, Ext code:300.

Bid Submission Checklist

The bidder shall submit the following:

- 1.The entire NIQ signed and sealed as a token of acceptance of terms and conditions.
- 2.Price Bid as per Appendix 2.
- 3.Copy of GST registration certificate.
- 4.Document to prove previous experience.
- 5.Documents to prove eligibility criteria and IS/IEC standards specified in Technical specification.

Sd/-
Managing Director

NIQ Annexures:

1. Appendix 1 - Scope of Supply and Technical Specifications
2. Appendix 2 - Format for Price Bid

Appendix-1

Scope of Supply & Technical Specifications to be followed:

1. Scope of Supply

The scope includes the Supply of 540 Wp (@ STC) or above Mono PERC Bi-Facial Glass to Glass PV Modules with Frame (Efficiency > 22% @ 10% gain) having BIS Certifications for total capacity of 220KWp. The modules are envisaged for use in 22 Nos of 10KW Solar power plants to be installed at various locations in Thiruvananthapuram District.

Schedule of Supply:

- The Solar PV Modules should be delivered at 3 Locations in Thiruvananthapuram, Kerala
- The bidder should complete the Supply of Solar PV Modules within 21 days from the date of issue of purchase order.

2. Technical Specifications

Sl. No	Item	Technical Requirement
1	PV module Configuration	Type: Mono crystalline Bi-Facial PERC Modules. Please enclose: a. Module overall assembly drawing with mounting holes b. Datasheet. c. Type Test certificates
2	Power Output	540 Watts Peak or higher at 0% albedo gain at Standard Test Condition (STC) of 1000w/m ² , AM 1.5 and 25 degrees Celsius
3	Efficiency	20.9 % or Higher at STC and 0% albedo percentage. 22.9% or Higher at STC and 10% albedo percentage.
4	Power Tolerance	+5% and -0% from the rated Wp at STC
5	Temperature coefficient of Power	Less than -0.25% / °C
6	Operating Conditions	Modules should perform satisfactorily in relative humidity up to 85% with temperature between -40°C to 85°C
7	Maximum System Voltage	1500 VDC
8	Certifications	The PV modules supplied shall have valid certifications as given below 1. IEC 61215 / IS 14286 2. IEC 61730 – I:2007 3. IEC 61730 – II:2007 4. IEC 61701 5. IEC 62804 Copies of above certificates & test reports shall be submitted along with the offer.
9	Application class as per IEC 61730	Class A
9.1	Surface load	Snow load 5400 Pa, Wind load 2400 Pa
10	Bill of Materials	
10.1	Solar Cells	Type Mono-Crystalline Bi-Facial PERC
10.2	Encapsulation	UV and weather stable Polyolefin based encapsulant

Sl. No	Item	Technical Requirement
10.3	Glass	Toughened low iron glass with minimum thickness of 2mm / 3.2mm and light transmission above 90%
10.4	Back Side	Glass
10.5	PV module frame	Anodized Aluminium module frames of sufficient thickness shall be used which are electrically & chemically compatible with the structural material used for mounting the modules having provision for earthing.
10.6	Junction Box	IP 67 rated
	Cable and connectors	UV rated solar Copper cables (IEC62930 / EN 20618 certified) of minimum 4 sqmm cross section and minimum length 300mm and MC4 connectors (IEC 62852 / EN 50521 Certified) shall be provided for connection .
10.7	Blocking Diodes	Schottky Type minimum 3 numbers
10.8	Sealant for edge Sealing of PV modules	Excellent ingress protection with electrical insulation (Break down voltage > 15 kV/mm.) and good adhesion strength.
10.9	Module Serial Numbers	Module serial numbers shall be inside the laminate with barcode for reading
10.10	RFID & Bar code	RFID and barcode shall be positioned inside the laminate and should contain information on traceability of solar cells and modules as per ISO 9000
10.11	Name Plate	Each module shall be provided with name plate label sticker containing the following information 1. Name of module Manufacturer 2. Module model number 3. Overall dimension 4. Weight 5. Pmax, Vmax, Imax 6. Short circuit current and open circuit voltage 7. System voltage 8. Relevant standards and certifying lab name 9. Warnings if any 10. Other relevant information
10.12	.PAN File	.PAN file for each module wattage band shall be provided for carrying out PVSyst calculations before supply
11	List of Manufacturers and Models of Solar PV Modules enlisted under ALMM Order (As on 27.09.2022) or latest revisions issued by Ministry of New and Renewable Energy, Govt. of India meeting above technical requirements shall be used in the project	

A. Warranty:

- Solar PV modules supplied must be warranted for 10 years for their material, manufacturing defects, workmanship. The output peak watt capacity which should not be less than 90% at the end of 10 years and 80% at the end of 25 years
- Original Equipment Manufacturers (OEM) Warrantee of the Solar PV Modules shall be submitted by the bidder when the materials delivered at site.
- The Warranty Card to be supplied with must contain the details of Solar PV Modules supplied including serial number.



Appendix – 2
(To be filled by bidder)

Price Details:

Sl No	Item	Model Number	Quantity Req	Unit	Rate/Wp	Amount(Rs)
1	Supply of MonoPERC Bifacial Glass to Glass PV modules with frame of capacity 540Wp or above at 03 site locations in Thiruvananthapuram District, Kerala.		220000Wp	Wp		
Total Basic Cost(Rs)						
GST @ 12%						
Total Cost(Rs)						
Rupees in words.....Only						

Terms and Conditions:

1. The above price inclusive of loading, Transportation to site, GST, all taxes and duties.
2. Supply will be completed within 21 Days from the date of purchase order.
3. Payment terms :
 - i. 10% of the contract value as advance against the submission of Proforma invoice.
 - ii. Balance 90% of the contract value shall be released within 15 days after the delivery of solar panels at site in good condition verified by Senior Manager-Execution (INKEL LTD).
 - iii. Release of tax portion is only after the reception of Original tax invoice.
4. Validity of the Quotation is 120 days from the date of opening of quotation.

Bidder Name:

Signature

Official Seal

Date: